The 1 API on New AWS Deployment Stack #2

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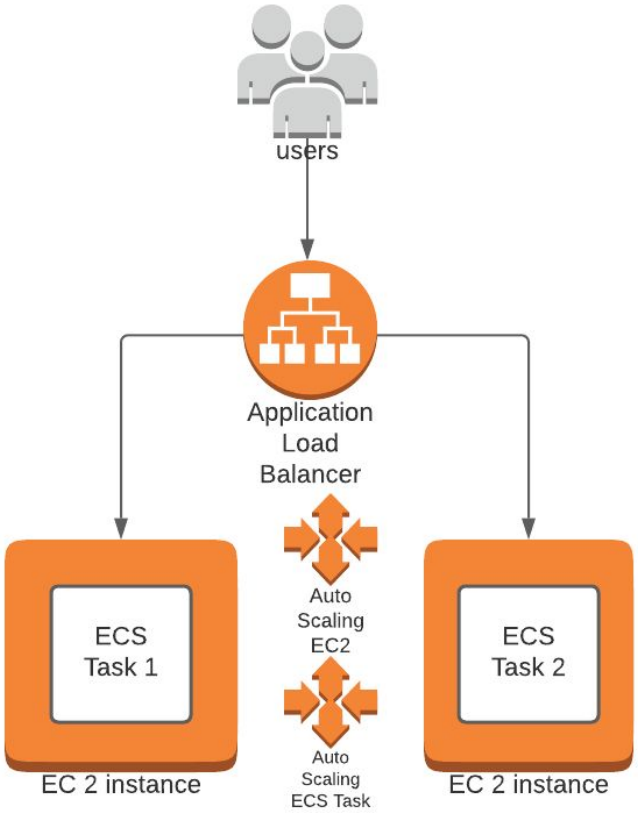
Growth Session #32 - December 11 2020

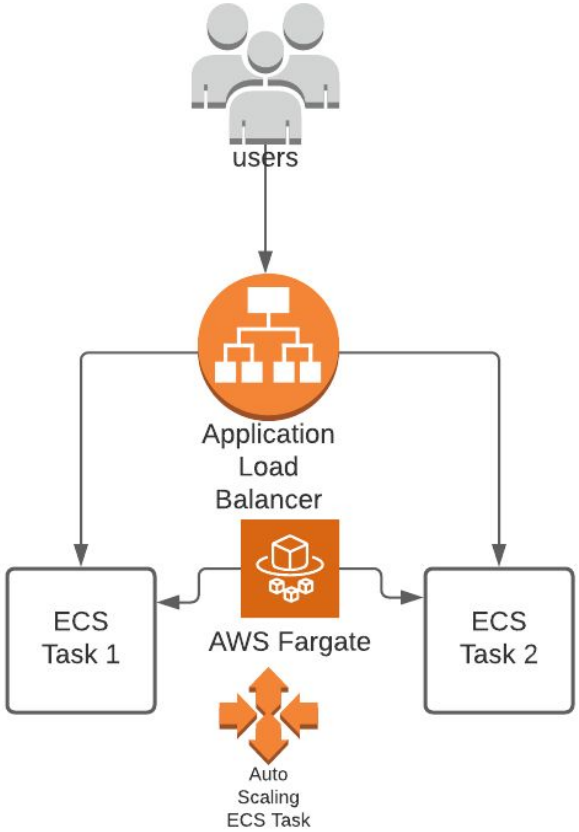
Objectives

- To deploy the1-api in serverless environment using AWS Fargate.
- Use nimble AWS account instead of The 1 AWS account.
- Explore CI/CD stack of AWS (CodeBuild, CodePipeline, Codedeploy)
- Use terraform for managing the infrastructure.

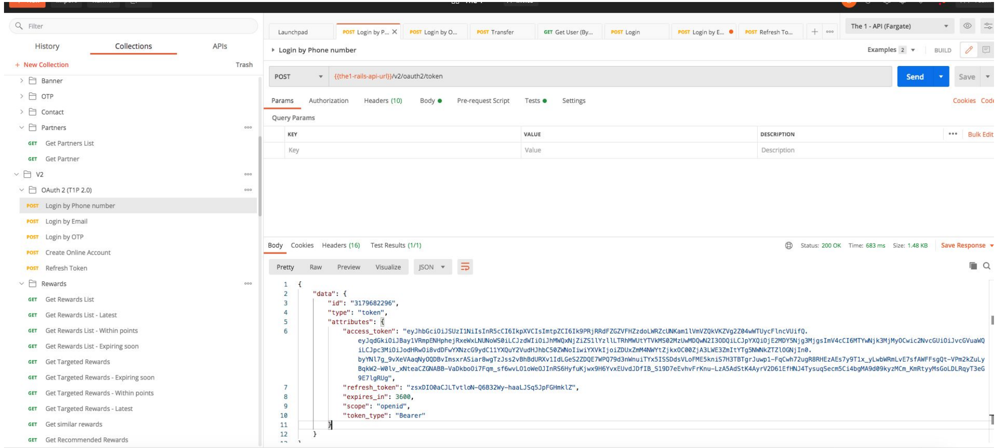
Infra Diagram: ECS and EC2



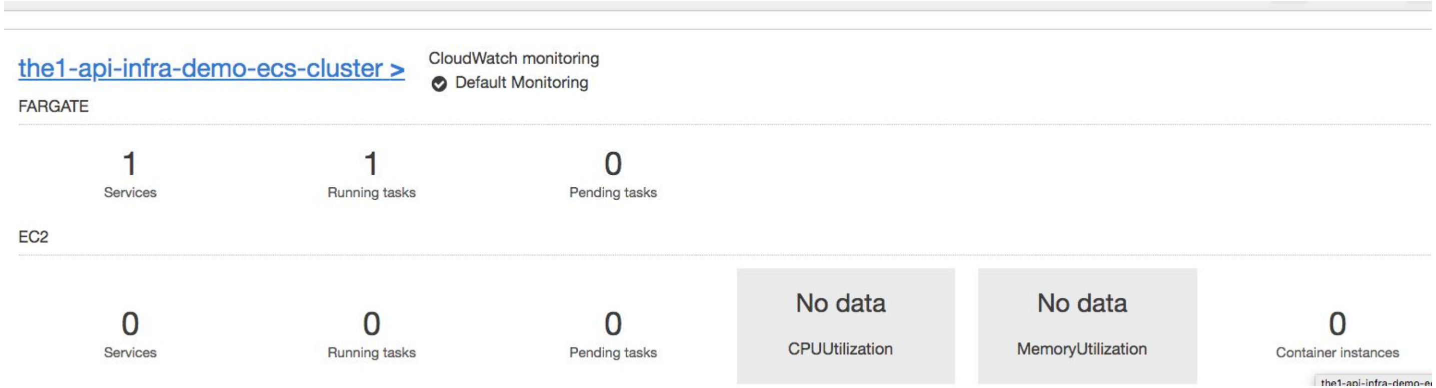
New Infra with Fargate



Demo



History
Collections
APIs
New Collection
Trash
Banner
OTP
Contact
Partners
Get Partners List
Get Partner
V2
OAuth 2 (T1P 2.0)
Login by Phone number
Login by Email
Login by OTP
Create Online Account
Refresh Token
Rewards
Get Rewards List
Get Rewards List - Latest
Get Rewards List - Within points
Get Rewards List - Expiring soon
Get Targeted Rewards
Get Targeted Rewards - Expiring soon
Get Targeted Rewards - Within points
Get Targeted Rewards - Latest
Get similar rewards
Get Recommended Rewards
Launchpad
The 1 - API (Fargate)
Login by Phone number
POST
{{the1-rails-api-url}}/v2/oauth2/token
Send
Save
Params
Authorization
Headers (10)
Body
Pre-request Script
Tests
Settings
Query Params
KEY
VALUE
DESCRIPTION
Bulk Edit
Body
Cookies
Headers (16)
Test Results (1/1)
Status: 200 OK
Time: 683 ms
Size: 1.48 KB
Save Response
Pretty
Raw
Preview
Visualize
JSON
"data": {
"id": "3179682296",
"type": "token",
"attributes": {
"expires_in": 3600,
"scope": "openid",
"token_type": "Bearer"



the1-api-infra-demo-ecs-cluster >
CloudWatch monitoring
Default Monitoring
FARGATE
1
Services
1
Running tasks
0
Pending tasks
EC2
0
Services
0
Running tasks
0
Pending tasks
No data
CPUUtilization
No data
MemoryUtilization
0
Container instances

Pros vs Cons (Compared to EC2)

Pros	Cons
Autoscaling is much simpler	Cannot/hard to SSH to fargate instance
No need to manage servers	Only available in limited regions
Increased isolation for greater security	No GPUs support

AWS Fargate

Pricing compare to EC2

Fargate

- Tasks are billed on CPU and memory use per hour, not the underlying EC2 instances.

  per vCPU per hour: $0.05056
  per GB per hour: $0.00553

- Both on-demand and spot tasks are supported

- Compute Savings Plan are provided to save the cost
- Resource requirements are rounded up, meaning you may still pay for unused resources.

EC2

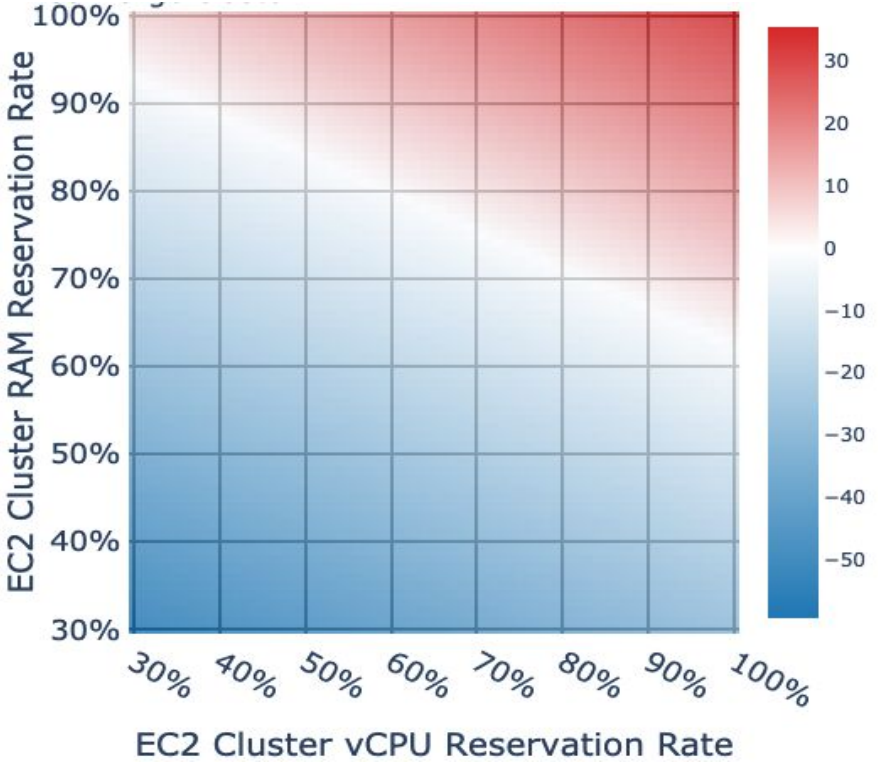
- Billing is based on the EC2 instances types and how long instances are retained

  C5.large: 2 cpu, 4GB RAM: $0.098/Hour

- On-demand, reserved and spot instances are supported
- Compute Saving Plan, Reserved Instances are provided to save cost

Pricing compare to EC2

cluster reservation rate: how much of the cluster's host CPU & RAM is reserved by containers



Fargate Costs - Percent Above (or Below) an EC2 Cluster with a given container reservation rate - *source*

M5.xlarge cluster

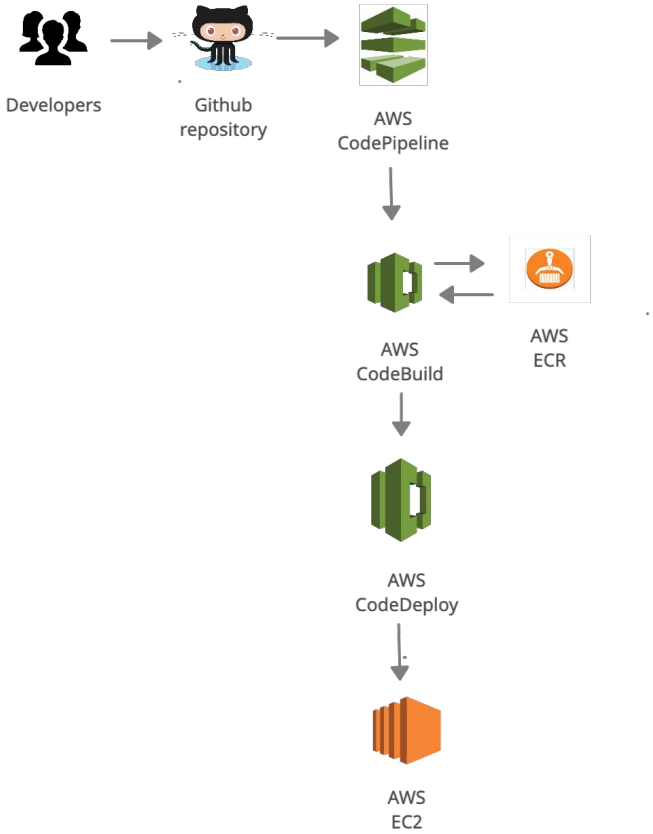
Pricing compared to EC2 - Takeaways

- Keep the ECS cluster reserved at a rate of 80%: moving to Fargate will save money
- Cluster is nearly 100% utilized: Fargate will cost between about 15% and 35% more.

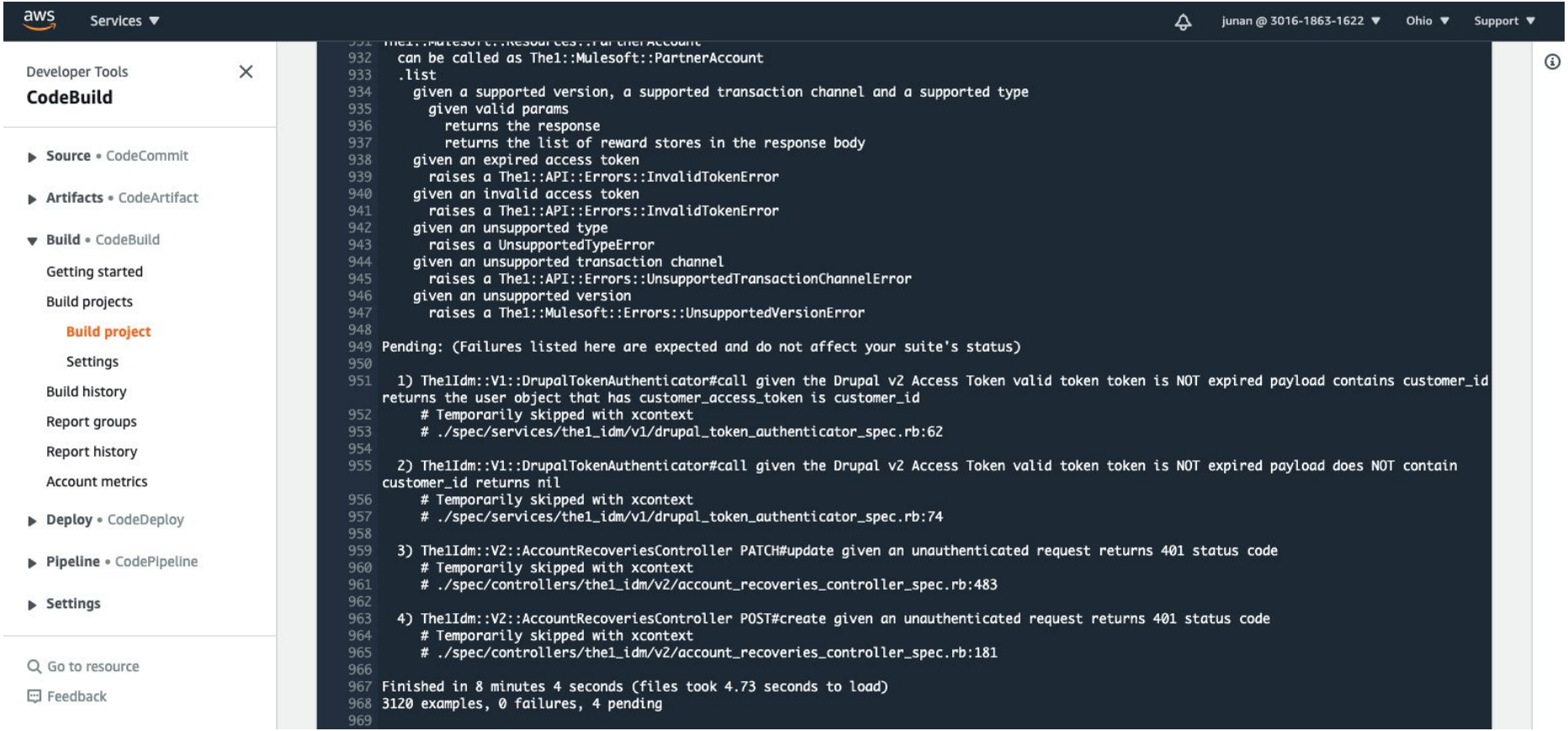
To Do

- To try out SSH into the instances
- Run on-off task like loading seed data on ECS Fargate

AWS CI/CD Flow



Demo


aws
Services
junan @ 3016-1863-1622
Ohio
Support
Developer Tools
CodeBuild
Source • CodeCommit
Artifacts • CodeArtifact
Build • CodeBuild
Getting started
Build projects
Build project
Settings
Build history
Report groups
Report history
Account metrics
Deploy • CodeDeploy
Pipeline • CodePipeline
Settings
Go to resource
Feedback
can be called as The1::Mulesoft::PartnerAccount
.list
given a supported version, a supported transaction channel and a supported type
given valid params
returns the response
returns the list of reward stores in the response body
given an expired access token
raises a The1::API::Errors::InvalidTokenError
given an invalid access token
raises a The1::API::Errors::InvalidTokenError
given an unsupported type
raises a UnsupportedTypeError
given an unsupported transaction channel
raises a The1::API::Errors::UnsupportedTransactionChannelError
given an unsupported version
raises a The1::Mulesoft::Errors::UnsupportedVersionError
Pending: (Failures listed here are expected and do not affect your suite's status)
1) The1Idm::V1::DrupalTokenAuthenticator#call given the Drupal v2 Access Token valid token token is NOT expired payload contains customer_id returns the user object that has customer_access_token is customer_id
Temporarily skipped with xcontext
./spec/services/the1_idm/v1/drupal_token_authenticator_spec.rb:62
2) The1Idm::V1::DrupalTokenAuthenticator#call given the Drupal v2 Access Token valid token token is NOT expired payload does NOT contain customer_id returns nil
Temporarily skipped with xcontext
./spec/services/the1_idm/v1/drupal_token_authenticator_spec.rb:74
3) The1Idm::V2::AccountRecoveriesController PATCH#update given an unauthenticated request returns 401 status code
Temporarily skipped with xcontext
./spec/controllers/the1_idm/v2/account_recoveries_controller_spec.rb:483
4) The1Idm::V2::AccountRecoveriesController POST#create given an unauthenticated request returns 401 status code
Temporarily skipped with xcontext
./spec/controllers/the1_idm/v2/account_recoveries_controller_spec.rb:181
Finished in 8 minutes 4 seconds (files took 4.73 seconds to load)
3120 examples, 0 failures, 4 pending

AWS CI/CD Pros vs Cons (Compared to Semaphore)

Pros	Cons
Manage access with IAM policy	Codepipeline does not support dynamic branch build
It has own container registry. ECR	
More instance powerful machine option. Semaphore height machine 8 CPU 16 GB RAM. AWS has 32 CPU, 154GB	
It’s all in AWS	

Pricing compare to Semaphore

AWS

AWS Codepipeline: 1$ / month

AWS CodeBuild: 0.000166$ / Second(Linux instance, 7GB RAM, 4 CPU)

AWS CodeDeploy: Free

Semaphore

Semaphore charges 0.000250$ (Linux instance, 8GB RAM, 4 CPU)

Progress

- Successfully deployed The 1 API in serverless environment using Fargate.
- Successfully run test using AWS CodeBuild.

Thanks!

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