In this assignment, I will cover the implementation of various Client Resiliency Patterns using Hystrix. Most of the implementation will be to add utilities and helper class around Asset-Service and re-implement the method getAssetByOrg. We will review timeouts, default values, bulk executions — using random multiple calls.

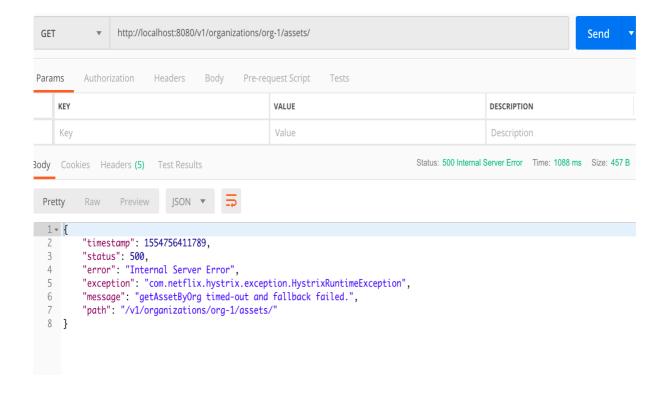
Running mvn clean package docker:build:

```
[INFO] -----[ pom ]-----
[INFO]
[INFO] --- maven-clean-plugin:2.6.1:clean (default-clean) @ assets-service ---
[INFO] Deleting /Users/rasoly/HES_Microservices/Part 2/HW2/Assignment2_2/target
[INFO] --- docker-maven-plugin:0.4.10:build (default-cli) @ assets-service ---
[INFO] Building image example
Step 1/1 : FROM java
---> d23bdf5b1b1b
ProgressMessage{id=null, status=null, stream=null, error=null, progress=null, progressDetail=null}
Successfully built d23bdf5b1b1b
Successfully tagged example: latest
[INFO] Built example
[INFO] -----
[INFO] Reactor Summary:
[INFO]
[INFO] Config Server ...... SUCCESS [ 8.446 s]
[INFO] Assignment2_2 ...... SUCCESS [ 7.371 s]
[INFO] Assignment2_2-parent-pom 0.0.1-SNAPSHOT ...... SUCCESS [ 0.204 s]
[INFO] --
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 28.200 s
[INFO] Finished at: 2019-04-08T23:05:56+03:00
[TNEO]
```

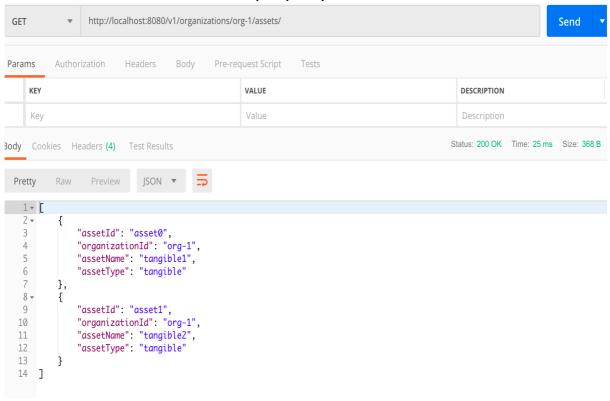
docker-compose -f docker/common/docker-compose.yml up

```
| 2019-04-08 20:06:57.727 INFO 6 --- [nio-8761-exec-8] c.n.e.registry.AbstractInstanceRegistry : Registered instance ORGANIZATIONSERVICE/08d207dfc643:organizat
eurekaserver 1
assetsservice 1
                       2019-04-08 20:06:57.984 INFO 22 --- [
                                                                        main] c.n.e.EurekaDiscoveryClientConfiguration : Registering application assetsservice with eureka with status
eurekaserver 1
                       | 2019-04-08 20:06:58.099 INFO 6 --- [nio-8761-exec-1] c.n.e.registry.AbstractInstanceRegistry : Registered instance ORGANIZATIONSERVICE/495c10b37b72;organizat
eurekaserver_1
                       | 2019-04-08 20:06:58.145 INFO 6 --- [io-8761-exec-10] c.n.e.registry.AbstractInstanceRegistry : Registered instance ASSETSSERVICE/6a5601a71593:assetsservice:8
                       | 2019-04-08 20:06:58.237 INFO 22 --- [ main] s.b.c.e.t.TomcatEmbeddedServletContainer : Tomcat started on port(s): 8080 (http)
assetsservice 1
                       2019-04-08 20:06:58.239 INFO 22 --- [
                                                                        main] c.n.e.EurekaDiscoveryClientConfiguration : Updating port to 8080
assetsservice 1
assetsservice 1
                       2019-04-08 20:06:58.245 INFO 22 --- [
                                                                        main] r.t.a.AssetsServiceApplication
                                                                                                                     : Started AssetsServiceApplication in 36.65 seconds (JVM runnin
eurekaserver 1
                       | 2019-04-08 20:06:58.667 | INFO 6 --- [nio-8761-exec-2] c.n.e.registry.AbstractInstanceRegistry : Registered instance ASSETSSERVICE/6a5601a71593:assetsservice:8
                       | 2019-04-08 20:07:16.903 INFO 6 --- [a-EvictionTimer] c.n.e.registry.AbstractInstanceRegistry : Running the evict task with compensationTime 0ms
eurekaserver 1
organizationservice2_1 | 2019-04-08 20:07:25.168 INFO 24 --- [freshExecutor-0] com.netflix.discovery.DiscoveryClient : Disable delta property : false
organizationservice2_1 | 2019-04-08 20:07:25.168 INFO 24 --- [freshExecutor-0] com.netflix.discovery.DiscoveryClient : Single vip registry refresh property : null
organizationservice2_1 | 2019-04-08 20:07:25.168 INFO 24 --- [freshExecutor-0] com.netflix.discovery.DiscoveryClient : Force full registry fetch : false
organizationservice2_1 | 2019-04-08 20:07:25.169 INFO 24 --- [freshExecutor-0] com.netflix.discovery.DiscoveryClient : Application is null : false
organizationservice2_1 | 2019-04-08 20:07:25.169 | INFO 24 --- [freshExecutor-0] com.netflix.discovery.DiscoveryClient : Registered Applications size is zero: true
organizationservice2_1 | 2019-04-08 20:07:25.169 INFO 24 --- [freshExecutor-0] com.netflix.discovery.DiscoveryClient : Application version is -1: false
organizationservice2_1 | 2019-04-08 20:07:25.169 INFO 24 --- [freshExecutor-0] com.netflix.discovery.DiscoveryClient : Getting all instance registry info from the eureka server
organizationservice2 1 | 2019-04-08 20:07:25.211 INFO 24 --- [freshExecutor-0] com.netflix.discovery.DiscoveryClient : The response status is 200
organizationservice_1 | 2019-04-08 20:07:26.383 INFO 22 --- [freshExecutor-0] com.netflix.discovery.DiscoveryClient : Disable delta property : false
organizationservice_1 | 2019-04-08 20:07:26.383 INFO 22 --- [freshExecutor-0] com.netflix.discovery.DiscoveryClient : Single vip registry refresh property : null
organizationservice_1 | 2019-04-08 20:07:26.383 INFO 22 --- [freshExecutor-0] com.netflix.discovery.DiscoveryClient : Force full registry fetch : false
organizationservice_1 | 2019-04-08 20:07:26.383 | INFO 22 --- [freshExecutor-0] com.netflix.discovery.DiscoveryClient : Application is null: false
organizationservice_1 | 2019-04-08 20:07:26.383 INFO 22 --- [freshExecutor-0] com.netflix.discovery.DiscoveryClient : Registered Applications size is zero : true
organizationservice_1 | 2019-04-08 20:07:26.384 INFO 22 --- [freshExecutor-0] com.netflix.discovery.DiscoveryClient : Application version is -1: false
organizationservice_1 | 2019-04-08 20:07:26.384 INFO 22 --- [freshExecutor-0] com.netflix.discovery.DiscoveryClient : Getting all instance registry info from the eureka server 0
organizationservice 1 | 2019-04-08 20:07:26.415 INFO 22 --- [freshExecutor-0] com.netflix.discovery.DiscoveryClient : The response status is 200
                       1 2010_04_00 20:00:16 004 TNEO 6 ___ [2_EvictionTimer] c.n.e.registry AbstractTostanceDenistry . Dunning the evict task with compensationTime 66ms
```

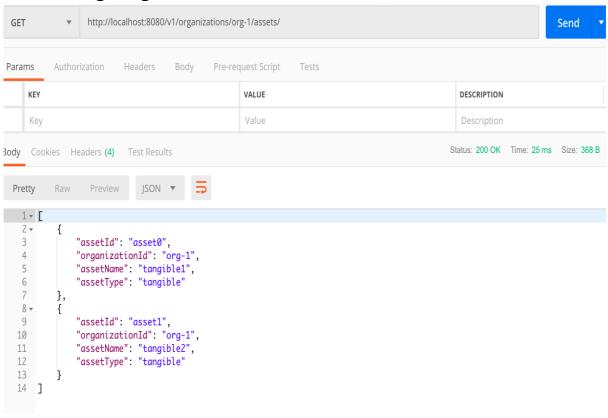
After few clicks - Error from the assets service:



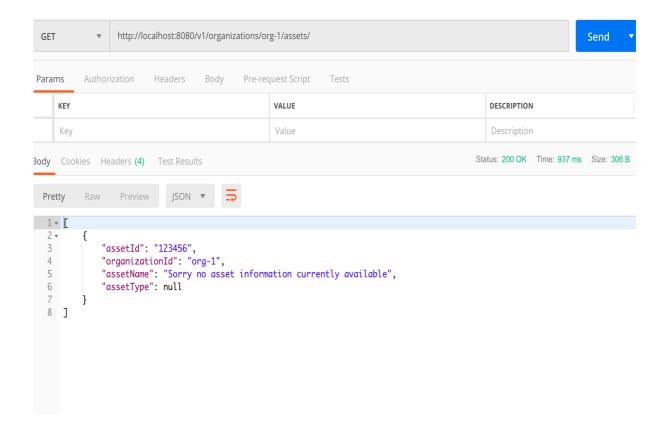
After few more clicks, works properly:



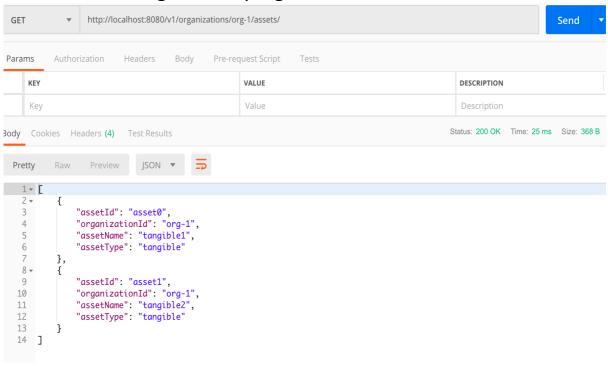
After configuring the timeout to 12 seconds, it doesn't fail.



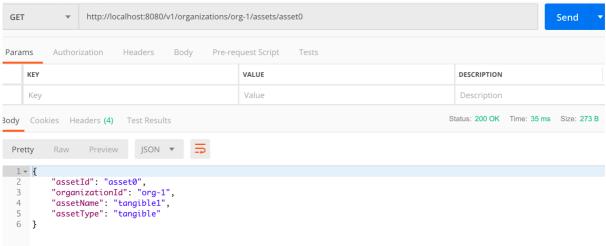
Fallback implementation of getAssetsByOrg:



Bulkhead around getAssetByOrg:



Getting a specific asset:



And the above is the same when running with test correlation id. Output: