

Testing Approach

Unit Testing: Our approach for this project was to test the backend services written in Node.js. Mocha and Jasmine open source framework were used to test unit test classes written in Node/sails server. After initially testing in the local development machine, it was integrated as part of the Jenkins script in our CI Server.

```
Te M In Gr op Sh Al Dc X W IA W T nc Ne Re St  
104.131.53.248:8080/job/openFDAWebApp_CIRunner/185/console  
Apps Postman Enterprise Architect Rental Technology FinancialSites Foodplora General Any.do Apple Developer Bowflex Exercises fo Other Bookmarks  
Jenkins openFDAWebApp_CIRunner #185
```

```
[32minfo: [39m  
[32minfo: [39m  
[32minfo: [39m  
[32minfo: [39m  
[32minfo: [39m Sails <| .-.-.  
[32minfo: [39m v0.11.0  
[32minfo: [39m  
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[32minfo: [39m  
[32minfo: [39m  
[32minfo: [39m  
[32minfo: [39m Server lifted in `~/var/lib/jenkins/jobs/openFDAWebApp_CIRunner/workspace`  
[32minfo: [39mTo see your app, visit [4mhttp://localhost:1337[24m  
[32minfo: [39mTo shut down Sails, press <CTRL> + C at any time.  
[37m[39m  
[34mdebug: [39m[90m-----[39m  
[34mdebug: [39m[90m:: Mon Jul 06 2015 15:31:12 GMT-0400 (EDT)[39m  
[37m[39m  
[34mdebug: [39mEnvironment : development  
[34mdebug: [39mPort : 1337  
[34mdebug: [39m[90m-----[39m  
Test Node API -> QueryController/SearchTrends  
#searchTrends  
  
✓ returns some JSON (433ms)  
  
Test Node API -> QueryController/query  
#query  
  
✓ food reason for recall with spinach returns status 200 (466ms)  
  
2 passing (6s)  
  
+ ./script/deploy  
Pseudo-terminal will not be allocated because stdin is not a terminal.  
Welcome to Ubuntu 14.04.2 LTS (GNU/Linux 3.13.0-52-generic x86_64)  
  
* Documentation: https://help.ubuntu.com/
```

E2E: End to end testing was accomplished by using Protractor open source toolset for testing Angular applications. User experience and functional testing was focused on this. Protractor provides hooks into Angular to test, allowing it to monitor the calls. For example, in our project, \$http services is the Angular service used to call backend services to openFDA data sets.

Protractor screenshots displaying the results:

```
~/Documents/AppDev/Projects/openFDAWebApp$ protractor ./test/e2e/conf.js
Using the selenium server at http://localhost:4444/wd/hub
[launcher] Running 1 instances of WebDriver
Started
..F.
```

Failures:

1) Given I am searching new enforcement report recalls When I push the submit button with Spinach as search Should bring a list of itemsw

Message:

Failed: Index out of bound. Trying to access element at index: 0, but there are only 0 elements that match locator by.repeater("user in \$data")

Stack:

Error: Index out of bound. Trying to access element at index: 0, but there are only 0 elements that match locator by.repeater("user in \$data")
at Array.forEach (native)

Error

at Object.<anonymous> (/Users/shyamagarajan/Documents/AppDev/Projects/openFDAWebApp/test/e2e/enforcementReport.spec.js:15:60)

From: Task: Run it("Should bring a list of itemsw") in control flow

at Array.forEach (native)

From asynchronous test:

Error

at Suite.<anonymous> (/Users/shyamagarajan/Documents/AppDev/Projects/openFDAWebApp/test/e2e/enforcementReport.spec.js:14:7)

at Suite.<anonymous> (/Users/shyamagarajan/Documents/AppDev/Projects/openFDAWebApp/test/e2e/enforcementReport.spec.js:2:5)

at Object.<anonymous> (/Users/shyamagarajan/Documents/AppDev/Projects/openFDAWebApp/test/e2e/enforcementReport.spec.js:1:63)

at require (module.js:380:17)

at Array.forEach (native)

at Function.promise (/usr/local/lib/node_modules/protractor/node_modules/q/q.js:650:9)

at _fulfilled (/usr/local/lib/node_modules/protractor/node_modules/q/q.js:797:54)

at self.promiseDispatch.done (/usr/local/lib/node_modules/protractor/node_modules/q/q.js:826:30)

at Promise.promiseDispatch (/usr/local/lib/node_modules/protractor/node_modules/q/q.js:759:13)

at /usr/local/lib/node_modules/protractor/node_modules/q/q.js:525:49

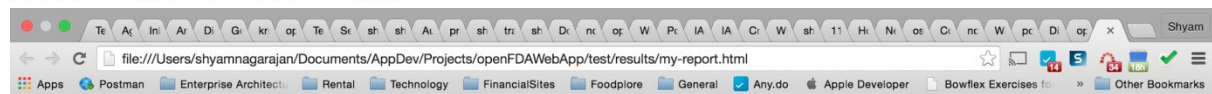
at flush (/usr/local/lib/node_modules/protractor/node_modules/q/q.js:108:17)

at process._tickCallback (node.js:419:13)

4 specs, 1 failure

Finished in 18.964 seconds

[launcher] 0 instance(s) of WebDriver still running



Given deployment is pushed to Prod Server (3 s)

✓ [Is the Home Page Title pulling up](#) (3 s)

Given I am reviewing the searchTrends (8 s)

Given I am reviewing the searchTrends When I pull the search trends page (8 s)

✓ [Should bring a list of Drug Listing](#) (8 s)

Given I am searching new enforcement report recalls (4 s)

Given I am searching new enforcement report recalls When I push the submit button with Spinach as search (4 s)

✗ [Should bring a list of itemsw](#) (4 s)

Failed: Index out of bound. Trying to access element at index: 0, but there are only 0 elements that match locator by.repeater("user in \$data")

Given I am opening the Drug Labeling menu (4 s)

Given I am opening the Drug Labeling menu When I pull the basepage (4 s)

✓ [Should bring a list of trends](#) (4 s)

