**Test Handover**

**FAQ:**

1. How much of automation test coverage done?   
   ***Ans:****Complete applicant journey is covered, Portfolio journey is 80% done to implemented functionality*
2. Can I run automation headless locally   
   *Ans: Yes you can run tests locally headless to carry on your work whilst tests running in background.*
3. Can I run acceptance test on Browser stack for cross browser testing?   
   *Ans: Yes  you can run automation acceptance test on browser stack which is integrated into framework , just need to purchase license and pass these run time .*  
   Please see how to run tests on browser stack section.
4. Are there any performance Tests ?   
   *Ans: Yes there are jmeter performance test scripts , please see non functional testing section.*
5. *How tests integrated in CD/CD pipeline?*  
   *Smoke tests runs on every commit and Acceptance test scheduled to run every two hrs in jenkins.*

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| **Test Artefacts Handover** | | |
| Acceptance Test BDD Feature files | <https://github.com/UKGovernmentBEIS/rifs-test/tree/master/grantsFunding-web-test/src/test/resources/features.functional/Rifs> | |
| End to End Tests | Applicant journey End to end tests  <https://github.com/UKGovernmentBEIS/rifs-test/tree/master/grantsFunding-web-test/src/test/resources/features.functional/Rifs/EndToEndTests> | |
| Automated Acceptance test and Smoke Test | <https://github.com/UKGovernmentBEIS/rifs-test/tree/master/grantsFunding-web-test/src/test/java/uk/gov/bis/grants/acceptanceTest> | |
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| **Automated Test** | | |
| Test tools Stack | [Test tools stack](https://beisdigital.atlassian.net/wiki/display/GF/Test+tools+stack) | |
| **Test framework repo** | <https://github.com/UKGovernmentBEIS/rifs-test/tree/master/grantsFunding-web-test> | |
| **Test Framework setup** | How to setup and run test | [How to run Automation tests](https://beisdigital.atlassian.net/wiki/display/GF/How+to+run+Automation+tests) |
| **Types of Automated Test:** | 1. Smoke Test: Runs applicant journey end to end  to ensure  Application is loaded correctly Writing to db properly. 2. Acceptance Tests: A detailed level test across all functionality is covered. 3. Performance test | Smoke Test: A trimmed version of acceptance test is being run as part of smoke test. This to ensure end to end journey works.  Acceptance Test: Full regression testing is performed as part of regression testing. |
| **Configure and Run Tests** | * **To run tests on different env -** | 1. Go to test framework folder  src/test/resources/TestConfig-ci.properties 2. Change envurl variable to desired env url qa,ci,demo. |
|  | **To run on different platforms**  **local Firefox/chrome** | 1.Change the platform value to Desktop.  2. Change the browser value to firefox in above properties file. |
|  | **To run Headless**  On phantomjs driver | Change platform value to headless in above properties file |
|  | **To run test on browser stack** | 1.Follow browserstack instructions to setup local testing 2. Change the busekey and busername in above properties file to your browserstack account ( note: use only trial version keys in properties file , if you have subscription keys then try pass runtime through env variable)  3.Change platform value to browserstack |
| **Non Functional Test** | | |
| **Performance Test**Applicant Journey | <https://github.com/UKGovernmentBEIS/rifs-test/tree/master/grantsFunding-performance-test> | |
| **Compatibility Test:**  Cross browser test | It is approved to procure browser stack license for this project to cover cross browser testing. So far cross browser testing is performed using trial subscription however its proved that acceptance test can run on browser stack. Please see steps how to run test on browser stack. | |

When off the shelve ,where to start from:

| **Test artefacts** | **Automated Test Coverage** | **Automation doesn't cover** |
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| **Test artefacts** | **Automated Test Coverage** | **Automation doesn't cover** |
| Acceptance Test | 1. Complete applicant Journey   Portfolio manager journey   * Amend Title * Amend about this opportunity * Amend Assessment criteria * Duplicate opportunity * Pick Draft opportunity from opp lib and amend sections * Validate PM opportunity detail page | In Portfolio manager Journey   1. Preview amended sections 2. Amend date deadline 3. Preview PM opportunity details 4. All sections preview 5. Validate opportunity statuses on opp lib page. |
| Performance Test | Jmeter scripts covers   * Opportunity list page for applicant journey * Browse Opportunity overview page * FillinQuestions * Preview application | Jmeter scripts doesn't cover Portfolio manager journey.  Need to pick this as immediate task as part of performance test. |

[Test tools stack](https://beisdigital.atlassian.net/wiki/display/GF/Test+tools+stack)

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| **TECHNOLOGY TEST TOOLS** | **TYPE OF TESTING /DESCRIPTION** | **VERSION** | **LICENSE** | **NOTES** |
| SELENIUM WEBDRIVER | Functional Web base testing - This tools is used to interpret user actions on browser such as click button/type text in field etc is supported by selenium webdriver tool. | 2.53.1 | Open Source |  |
| Selenium Grid | Functional Testing- Parallel testing- functional | 2.53.1 | Open Source | Need to setup on dedicated virtual box with selenium RC runnning with multilple browser instances. |
| Cucumber-jvm | Functional Testing- mplement BDD practice in testing , this tool would interpret plain english GIVEN WHEN THEN gherkin language and called relevant code in the background to run the test. | 1.2.4 | Open  Source | BAs,stakeholders can easily understand the test report which will present what features has passed or failed. |
| Java | Functional testing- all code in background is written in simple java classes which are written in definite design pattern called page object model. | 1.8 | Open  Source |  |
| Gradle | Build tool to build test java project and download required require dependencies and this will allow to run gradle task such as running tests. | 2.7 | Open Source |  |
| Atlassian JIRA | Agile tool for project and defect tracking. Also report generation and workflow management. |  |  |  |
| Google Drive | Documentation, cloud storage, calendar, communications and notifications |  |  |  |
| Slack | Communications channel within team. |  |  | Cross-government standard |
| Eclipse | Integrated Development Environment |  | Open Source | <https://www.jetbrains.com/idea/> |
| JUnit | Testing framework for Java programing. |  | Open Source | <http://testng.org/doc/index.html> |
| Jenkins- CI | For Continuous building, deployment and running automation test on designated test env. |  | Open Source (MIT) | <https://jenkins.io/>  <http://jenkins.lite.bis.gov.uk/> |
| GitHub | All test automation code is maintained in public repo as GDS requirement. Version control and automation code repository. Code reviews via pull requests within TEST team. |  | Commercial Account | <https://github.com/UKGovernmentBEIS/rifs-test> |
| OWASP Dependency-Check (Jenkins Plugin) | Security Testing- Inspects project libraries for known vulnerabilities. Build chain tool/plugin. |  | Open Source (Apache) | <https://wiki.jenkins-ci.org/display/JENKINS/OWASP+Dependency-Check+Plugin> |
| Browserstack | Cross browser compatibility Testing - All standard devices/browsers considered as per the GDS guidelines for application compatibility testing. |  | Subscription | <https://www.browserstack.com/> |

[How to run Automation tests](https://beisdigital.atlassian.net/wiki/display/GF/How+to+run+Automation+tests)

On Mac

You can run the test ether through gradle task or through sbt.

Steps on Mac through SBT

1. checkout test repo from <https://github.com/UKGovernmentBEIS/rifs-test>
2. cd to project root folder grantsFunding-web-test on command prompt
3. type command→ /.sbt
4. type command→ clean
5. type command→ test:compile
6. type command→ testOnly uk.gov.bis.grants.acceptanceTest.AcceptanceTest

Now you should see test running on your machine.

Through gradle test

1. checkout test repo from <https://github.com/UKGovernmentBEIS/rifs-test>
2. cd to project root folder grantsFunding-web-test on command prompt
3. type command → gradle clean test
4. type command → gradle test  -Dtest.single=AcceptanceTest

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On Windows

1. Connect VPN [Howto: Connect to the VPN](https://beisdigital.atlassian.net/wiki/display/GF/Howto%3A+Connect+to+the+VPN)
2. Open IntelliJ and Open File>Settings     
   Check whether you have Cucumber for Java and Gherkin installed.
3. Open IntelliJ and Open File>Project Structure     
   Select Project and Set Java 1.8
4. Clone the project     
   git clone <https://github.com/UKGovernmentBEIS/rifs-test>
5. Run Tests in command prompt     
   gradle clean test     
   gradle test  -Dtest.single=AcceptanceTest
6. Run tests in IntelliJ  
   In IntelliJ, navigate to rifs-test\grantsFunding-web-test  and click OK.  
   Right click on .feature file and click Run