**Testing Strategy for Faster Scalability of Spree Ecommerce Web Platform/Framework.**

Functional Spec:

Spree Ecommerce is an open source ecommerce framework. Spree has been used by numerous companies from different domains (Fashion, beauty , Health etc..) to build products like marketplace , ecommerce sites quickly by leveraging the underlying solution , thus enabling them to release their products to market faster.

Customers are happy that they are able to leverage the extensive capabilities

provided by Spree Ecommerce , however of late lot of customers are not happy with the quality of the solution in general. Lot of bugs have been introduced lately and any new functionality that needs to be built in the underlying solution takes a lot of time given the lack of safety net. Introducing a new feature impacts existing features as well.

The Core Spree Ecommerce team recognises the issues faced by customers. Spree team is also planning to enhance their solution to enable them to enter new markets/regions. Entering new markets would also mean integration with local payment , shipping systems etc.

In addition to this , they are looking at building an omni-channel capability so as to give a seamless shopping experience to their customers.

Keeping in mind the above issues faced by Spree team and also their roadmap for the future, they approached ThoughtWorks to devise a “Test Strategy” which will help them to scale faster without compromising on quality.

Reviewers and Signoff History

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| --- | --- | --- | --- |
| **Team** | **Reviewer** | **Approval Date** | **Notes** |
| <team> | <name> | <mm/dd/yy> | <Comments> |
| Development lead | gama | 05/06/19 |  |
| Functional test lead | XYZ | 05/06/19 |  |
| Upgrade lead | abc | 05/06/19 |  |
| Security lead | pqr | 05/06/19 |  |
| FST lead | jkl | 05/06/19 |  |
| System Test lead | mno | 05/06/19 |  |
| Performance lead | pqr | 05/06/19 |  |
| Product Management lead | alpha | 05/06/19 |  |

**Overall Summary of test approach:**

From the Functional spec we understand that the main intention is to scale/support different regions and languages .Additionally there will be OmniChannel support.

So the main deliverables from Thoughtworks to Spree are as follows.

1. Assert/Qualify that Spree is fully functional with different Regions and Languages.
2. Assert/Qualify that for Spree’s customers it is easy to upgrade from their current version to this new version.
3. Assert/Qualify the Spree’s new Feature “Omni-Channel” is fully functional based on Different regions and Languages.
4. Tracker for all the issues raised during Testing and what all has been fixed and known issues.

**Approaches and Tools:**

We follow Agile test methodology and Test Driven Development.

**Agile**: Jira

**Continuous Integration/Continuous Development** : Jenkins

**For unit Testing**: TestNG and Junit

**UI testing** : Selenium , Cucumber , Page Object Model.

**Api Testing**: RestAssured , Postman

**Version Control**: Git

**Development**

**Owner: gama**

Gama’s team to provide breakdown list of features and For major features We will have a **QA resource working with Dev** at early stages of Design and Development.

Provide at-least **two sandbox builds per week**.

**What is tested (Scope)**

1. **Unit testing of all the major features.**
2. **Complete Component test.**

**What is not tested (Out of scope)**

1. **System/Integration testing .**

**Automation Strategies:**

1. Automated way to execute unit Tests : Ex: mvn test
2. Employ code Coverage tool like fortify , coverity for catching obvious bugs.

**Functional Test**

**Owner: XYZ**

**What is tested (In-Scope)**

1. All basic acceptance test cases for “Region and Language” support.
2. Testing switching from one region to other region.
3. Test cases related to pricing items according to region.
4. Test cases related to Location changes for shipping based on Country/Region.
5. Test cases covering impact on App Admin functionality.
6. Test cases covering Omni Channel features.
7. Testing on supported browsers (Chrome , IE , Safari)
8. Testing on supported Devices (Phone , Laptop , Desktop , Notepads)
9. Testing on supported OSes (Android , iOS , windows)

**What is not tested (Out of scope)**

1. Backward compatibility tests.

b) Security / Performance and Other non-functional tests.

**Automation Strategies:**

Daily BAT job in Jenkins will be created. The BAT has following tests.

1. Selenium UI tests.
2. API tests

**Upgrade**

Owner: abc

**What is tested (In scope):**

a)The last two released versions are only supported to be upgraded. So upgrade will be done last two versions only.

b) Backward compatibility tests will be carried out.

c) Will perform a smoke tests post upgrade.

**What is not tested(Out of scope):**

1. Upgrade testing not on all devices , Only Major devices and Latest greatest OS versions**.**

]**Automation Strategies :**

1. A jenkin job performing an upgrade by taking sandbox and upgrading an older version applaince/webapp.
2. For Adhoc upgrade request manual upgrade , Like upgrade on Windows notepad.

**Security Team:**

Owner: pqr

**What is tested :**

1. Security team to scan for vulnerabilities in the code repo.
2. All softwares/Libraries versions in used in developing and testing are free from vulnerabilities and latest patches are upgraded.

**What is not tested :**

**Automation Strategies**

Use fortify or any other security scan tools.

**System Test (includes Interoperability testing)**

Owner: mno

**What is tested :**

1. **All the components interoperability is tested :**

**Like change in Country should result in change in Currency , Shipping location , Chat language change options .**

**b) Test on all supported devices, Browsers and Channels (chat ,Facebook**

**and twitter ).**

**c) Installation and deployment tests.**

**What is not tested: (Out of scope)**

1. **Trivial tests like login / change password / add to cart etc will not be tested.**

**Automation Strategies:**

1. **A jenkins Job which deploys the new sandbox web-app and executes Rest apis for language change , Country change and other switchings.**
2. **Auto build of environment for system testing on mobile devices like laptop , Mobile phones for internal faster development and system Tests.**

**Performance Team**

Owner:pqr

**What is tested (In-scope ):**

**What is not tested**

**Automation Strategies**

Regression Testing

Exploratory Testing

Test Dependencies

CAT Requirements

Test Execution Matrix