

**PROJECT NAME**

**Test Strategy**

**Prepared by:** Author

**PURPOSE OF DOCUMENT**

The Test Strategy defines the components and functionality to be tested (and not to be tested), who will do the tests and the pass/fail criteria.

**RACI**

|  |  |  |  |
| --- | --- | --- | --- |
| **Responsible** | **Accountable** | **Consult** | **Inform** |
| Business Analyst | Project Board & Project Executive | Infrastructure, Applications, Service Management, Research IT | Project Manager, Business Owner |

*Guidance Note: This should show who is responsible, accountable, consulted and informed with regard the document*

**DOCUMENT CONTROL**

CHANGE CONTROL TABLE

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Version** | **Amendment** | **Description** | **Release Date** | **Updated by** |
|  |  |  |  |  |

**APPROVALS**

|  |  |  |  |
| --- | --- | --- | --- |
| **Approver** | **Title** | **Date of issue** | **Version** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**DISTRIBUTION**

This document has been distributed to:

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Title** | **Date of issue** | **Version** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**Contents**

[1 Introduction 5](#_Toc444094335)

[1.1 Test Strategy Objectives 5](#_Toc444094336)

[1.2 Testing Strategy 5](#_Toc444094337)

[1.3 Reference Material 5](#_Toc444094338)

[2 Test Items 5](#_Toc444094339)

[2.1 Program Modules 5](#_Toc444094340)

[2.2 Operational Scope 5](#_Toc444094341)

[3 Features To Be Tested 5](#_Toc444094342)

[4 Features Not To Be Tested 6](#_Toc444094343)

[5 Test Categories 6](#_Toc444094344)

[5.1 Component Testing 6](#_Toc444094345)

[5.2 Interface Testing 6](#_Toc444094346)

[5.3 Security Testing 6](#_Toc444094347)

[5.4 Recovery Testing 6](#_Toc444094348)

[5.5 Performance Testing 6](#_Toc444094349)

[5.6 Regression Testing 6](#_Toc444094350)

[5.7 Integration Testing – Requirements Traceability Matrix 6](#_Toc444094351)

[6 Suspension / Pass / Fail / Exit Criteria 7](#_Toc444094352)

[6.1 Suspension Criteria 7](#_Toc444094353)

[6.2 Resumption Criteria 7](#_Toc444094354)

[6.3 Pass / Fail / Exit Criteria 7](#_Toc444094355)

[7 Testing Process 7](#_Toc444094356)

[7.1 Test Deliverables 7](#_Toc444094357)

[7.2 Testing Tasks 7](#_Toc444094358)

[7.3 Responsibilities 7](#_Toc444094359)

[7.4 Schedule 8](#_Toc444094360)

[8 Requirements for Testing 8](#_Toc444094361)

[8.1 Hardware 8](#_Toc444094362)

[8.2 Software 8](#_Toc444094363)

[8.3 Security 8](#_Toc444094364)

[8.4 Tools 8](#_Toc444094365)

[8.5 Risks and Assumptions 8](#_Toc444094366)

[9 Document Change Procedure 9](#_Toc444094367)

[10 Appendix 1 - Severity Categories For Test Suspension Criteria 10](#_Toc444094368)

# Introduction

This document describes the strategy, procedures and plan for functional testing of <service name>. It outlines which types of tests will be carried out on which components of the service.

Details of the actual test cases based on the original functional requirements and results will be recorded in the Test Plan document, together with a traceability matrix indicating how each of the functional requirements have been tested.

## Test Strategy Objectives

*[Guidance Note: The objective of the test strategy is to ensure a high level of confidence in the correctness and usefulness of the project deliverables.]*

## Testing Strategy

*[Guidance Note: The strategy for testing is a combination of automatic and manual tests… The components of the system which don't involve user interaction will be tested automatically by …]*

*[Specify the operational environments to be used - Development, UAT etc.]*

## Reference Material

* *[Service Level Requirements]*
* *[Functional & Technical Requirements Document]*
* *[Service Design Document]*
* *[Term Definitions and Acronyms]*

# Test Items

## Program Modules

*[Guidance Notes:*

*User Interface*

*Manual execution of a set of test cases will be performed on all aspects of the user interface to ensure correct product operation*

*Batch Job*

*The new batch job will be executed on the same data set as the existing batch job and the output compared for accuracy.*

*Database*

*Selected SQL queries will be executed directly via ….]*

## Operational Scope

*[Guidance Notes: This test plan will ensure that the application runs in the development and test environment available. The User Acceptance Test plan is responsible for ensuring operation in the production environment.]*

# Features To Be Tested

* *[File generation*
* *User Creation and Modification*
* *Customer Creation and Modification*
* *Location Creation and Modification*
* *Security / User Permissions]*

# Features Not To Be Tested

* *[Scalability limits*
* *Response time (to a limited extent)*
* *Dataset size]*

# Test Categories

*[Guidance Notes: Complete testing may require some or all of the following types of test:]*

## Component Testing

*[Guidance Notes: Individuals will test the components they are working on during development...] [Specify nature and detail of test]*

## Interface Testing

*[Guidance Notes: The browser interface will be tested manually by….]*

## Security Testing

*[Guidance Notes: Consider requirements for penetration testing for externally accessible (and possibly some internally accessible) systems.*

*Example text: Attempts will be made to access each JSP page without proper authentication to ensure that only authenticated accesses are allowed.]*

## Recovery Testing

*[Guidance Notes: Consider requirements for infrastructure testing including disaster recovery testing where relevant.*

*Example text: Recovery testing will be performed to ensure that data stored in the Oracle database and the file system can be recovered in a consistent state after a system failure.]*

## Performance Testing

*[Guidance Notes: Performance testing will be conducted manually. Testers will use the user interface to determine if the system responds in a reasonable time.]*

## Regression Testing

*[Guidance Notes: When a change is made to the system, all test cases for all components relating to the modified component will be re-executed to ensure no regression occurs as a result of the change.]*

## Integration Testing – Requirements Traceability Matrix

*[Guidance Notes: A detailed set of test cases will be carried out to cover all requirements listed in the Functional Requirements Document (FRD). A traceability matrix completed in the Test Plan (example below) will verify that all functional requirements are met satisfactorily].*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement** | **FRD/Design Ref**  | **Test ID** | **Pass / Fail** | **Date**  |
| *[Displays correct data]* | *[FRD 2.1]* | *[Test 1.1]* |  |  |
| *[All changes recorded in audit trail]* | *[FRD 3.2]* | *[Test 2.1]* |  |  |

# Suspension / Pass / Fail / Exit Criteria

## Suspension Criteria

*[Guidance Notes: Test case execution will be suspended if a critical failure or defect that impedes the ability or value in performing the associated test(s) is discovered.] See Appendix 1.*

## Resumption Criteria

*[Guidance Notes: Test case execution will be resumed when a developer asserts that the problem or defect causing suspension has been fixed. All test cases that exercise the modified portions of the project will be re-executed.] See Appendix 1.*

## Pass / Fail / Exit Criteria

*[Guidance Notes: A test will be considered ‘passed’ if the results meet the pre-defined minimum requirement specified for the test.]*

*[Guidance Notes: Exit criteria can be defined as the set of conditions, agreed with stakeholders, for permitting a process to be officially completed. Exit criteria tell the test team when to stop testing. The Test team needs to ensure that goals of testing the project or a particular phase of the project have been met successfully.*

*For example, Exit criteria might be defined as:*

1. *90% - 95% of tests executed and passed.*
2. *No Sev 1 or Sev 2 defects open (see Appendix 1).]*

# Testing Process

## Test Deliverables

*[Guidance Notes: A test report will be included in the project deliverables. This report will contain the set of test cases, a history of all formal test executions and a summary of the final state of the test suite.]*

## Testing Tasks

*Guidance Notes:*

* *[Develop Test Cases*
* *Develop scripts for the automated tasks*
* *Prepare a database solely for automated testing to set up and tear down*
* *Execute tests*
* *Report defects*
* *Complete test report*
* *Manage change]*

## Responsibilities

*[Guidance Notes: All developers are responsible for the completion of all component and integration testing tasks.*

*PM is responsible for approving the Test Plan and the Test Cases and is also responsible for critiquing the demonstrations and final acceptance of all work products.]*

## Schedule

|  |  |  |
| --- | --- | --- |
| **Task** | **Deliverable** | **Date Performed** |
| Develop test cases |  |  |
| Develop scripts for automated testing |  |  |
| Prepare testing database |  |  |
| Execute tests |  |  |
| Report defects |  |  |
| Complete test report | Test Case Report |  |

# Requirements for Testing

## Hardware

*Guidance Notes – for example:*

*[2 Microsoft Windows PC computers]*

*[1 UNIX computer with a network connection PCs above]*

## Software

*Guidance Notes – for example:*

 *[1 – Installation of Windows 2000*

*1 – Each of Microsoft Internet Explorer 5.0, 5.5, 6.0*

*1 – Oracle 9i*

*1 -- Sun's J2RE version 1.4*

*1 – Microsoft Office (Word, Excel) for reports and defect tracking]*

## Security

*[Guidance Notes – for example:*

*[The test environment will be using a copy of the production data which contains student contact details. Students’ e-mail addresses will be changed to avoid sending e-mails to students during testing. Access rights to the test environment will be restricted to those directly involved in testing.]*

## Tools

*Guidance Notes – for example:*

 *[The testing tools will be in-house scripts used to automate the setup of the database for executing manual tests]*

## Risks and Assumptions

*Guidance Notes – for example:*

 *[The hardware and software environment differs slightly from the target production system.*

*There is an assumption that the production environment will be of higher spec than the test environment.]*

# Document Change Procedure

*[Guidance Notes: The procedure for changing this test strategy is as follows:*

* *Propose the change to the software development team*
* *The team will discuss the proposal and either reject it, accept it, or accept it with modifications.*
* *If the team accepts the proposal, then it and any agreed modifications will be implemented.]*

# Appendix 1 - Severity Categories For Test Suspension Criteria

**Severity Type: Critical / Sev 1**

*[Guidance Notes:*

*Defect Impact: The majority of the application functionality is not testable because of the defect. Blocks more than 40% of test cases in a functional area.*

*Functionality Impacted: Key functionalities not working (e.g. Unable to login) OR Loss of data OR application crashes OR results in performance degradation and there is no workaround available.*

*Impact on Test Execution: All or majority of Test Cases cannot be executed until the defect is fixed.]*

**Severity Type: Serious / Sev 2**

*[Guidance Notes:*

*Defect Impact: Testing of one of the application functionalities is blocked. Blocks 25 to 40% test cases in a functional area.*

*Functionality Impacted: An important functionality (e.g.: - Update User details etc.,) not working or feature does not work as expected; there are multiple functions that are dependent on the function which is not working.*

*Impact on Test Execution: Testing of the defective functionality cannot be continued until defect is resolved.]*

**Severity Type: Moderate / Sev 3**

*[Guidance Notes:*

*Defect Impact: Testing of one of the functionality is blocked, however there is a workaround to test the functionality. Blocks fewer than 25% of test cases in a functional area.*

*Functionality Impacted: An important functionality does not work as expected only with few input sets of data. Other application functions of the application are not dependent on this functionality.*

*Impact on Test Execution: Majority of Test Cases can still be executed.]*

**Severity Type: Cosmetic / Sev 4**

*[Guidance Notes:*

*Defect Impact: Cosmetic issues such as spelling mistakes, text fonts, image size / quality or alignment of labels, text boxes etc., Impacts very few test cases or none of the test cases in the test suite.*

*Functionality Impacted: Minor or cosmetic issues.*

*Impact on Test Execution: Testing of application can continue with this existing defect.]*