Test Plan

User Account Configuration Project

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For MentorCliQ

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# INTRODUCTION

## Purpose

This test plan describes the testing approach and overall framework that will drive the UI testing of the User Account Configuration application.

## Project Overview

User Acc Configuration app has a user account configuration wizard with multiple steps:

* User Registration
* Group Management

## Audience

* Project team members perform tasks specified in this document, and provide input and recommendations on this document.
* Project Manager Plans for the testing activities in the overall project schedule, reviews the document, tracks the performance of the test according to the task herein specified, approves the document and is accountable for the results.
* The stakeholders’ representatives and participants (individuals as identified by the PMO Leads) may take part in the UAT test to ensure the business is aligned with the results of the test.
* Technical Team ensures that the test plan and deliverables are in line with the design, provides the environment for testing and follows the procedures related to the fixes of defects.
* Business analysts will provide their inputs on functional changes.

# TEST STRATEGY

## Test Objectives

The objective of the test is to verify that the functionality of User Acc Configuration UI works according to the specification.

The test will execute and verify the test scripts, identify, fix and retest all high and medium severity defects per the entrance criteria, prioritize lower severity defects for future fixing via CR.

The final product of the test is:

* A production-ready software;
* A set of stable test scripts that can be reused for Functional and UAT test execution.

## Test Assumptions

**Key Assumptions**

* Production like data required and be available in the system prior to start of Functional Testing
* In each testing phase, Cycle 3 will be initiated if the defect rate is high in Cycle 2.

**General**

* Exploratory Testing would be carried out once the build is ready for testing
* The Test Team will be provided with the proper access to Test environment
* The Test Team assumes all necessary inputs required during Test design and execution will be supported by Development/BUSINESS ANALYSTs appropriately.
* Test case design activities will be performed by QA Group
* Test environment and preparation activities will be owned by Dev Team
* Dev team will provide Defect fix plans based on the Defect meetings during each cycle to plan. The same will be informed to Test team prior to start of Defect fix cycles
* BUSINESS ANALYST will review and sign-off all Test cases prepared by Test Team prior to start of Test execution
* The defects will be tracked through JIRA only. Any defect fixes planned will be shared with Test Team prior to applying the fixes on the Test environment
* Project Manager/BUSINESS ANALYST will review and sign-off all test deliverables
* The project will provide test planning, test design and test execution support
* Test team will manage the testing effort with close coordination with Project PM/BUSINESS ANALYST
* Project team has the knowledge and experience necessary, or has received adequate training in the system, the project and the testing processes.
* There is no environment downtime during test due to outages or defect fixes.
* The system will be treated as a black box; if the information shows correctly online and in the reports, it will be assumed that the database is working properly.

## Test Principles

* Testing will be focused on meeting the business objectives, cost efficiency, and quality.
* There will be common, consistent procedures for all teams supporting testing activities.
* Testing processes will be well defined, yet flexible, with the ability to change as needed.
* Testing activities will build upon previous stages to avoid redundancy or duplication of effort.
* Testing environment and data will emulate a production environment as much as possible.
* Testing will be a repeatable, quantifiable, and measurable activity.
* Testing will be divided into distinct phases, each with clearly defined objectives and goals.
* There will be entrance and exit criteria.

## Scope and Levels of Testing

### Exploratory

**PURPOSE**: the purpose of this test is to make sure critical defects are removed before the next levels of testing can start.

**SCOPE**: User Acc Configuration App UI e2e tests

**TESTERS**: Testing team.

**METHOD**: this exploratory testing is carried out in the User Acc Configuration app UI without any test scripts and documentation

**TIMING**: at the beginning of each cycle.

### Functional Test

**PURPOSE:**  UI e2e testing will be performed to check the main functionalities of application.

**Scope:** happy path scenarios, negative scenarios of e2e flow

**TESTERS**: Testing Team.

**METHOD**: The test will be performed according to Functional scripts, which are stored in Jira test.

**TIMING**: after Exploratory test is completed.

### User Acceptance Test (UAT)

**PURPOSE**: this test focuses on validating the business logic. It allows the end users to complete one final review of the system prior to deployment.

**TESTERS**: the UAT is performed by the end users (L1, L2 and L3).

**METHOD**: Since the business users are the most indicated to provide input around business needs and how the system adapts to them, it may happen that the users do some validation not contained in the scripts. Test team write the UAT test cases based on the inputs from End user (L1,L2 and L3 users) and Business Analyst’s.

**TIMING**: After all other levels of testing are done. Only after this test is completed the product can be released to production.

#### TEST DELIVERABLES

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No.** | **Deliverable Name** | **Author** | **Reviewer** |
| 1. | UAT Test Cases | Test Team | Business Analyst’s Sign off |

# EXECUTION STRATEGY

## Entry and Exit Criteria

* The entry criteria refer to the desirable conditions in order to start test execution; only the migration of the code and fixes need to be assessed at the end of each cycle.
* The exit criteria are the desirable conditions that need to be met in order proceed with the implementation.
* Entry and exit criteria are flexible benchmarks. If they are not met, the test team will assess the risk, identify mitigation actions and provide a recommendation. All this is input to the project manager for a final “go-no go” decision.
* Entry criteria to start the execution phase of the test: the activities listed in the Test Planning section of the schedule are 100% completed.
* Entry criteria to start each cycle: the activities listed in the Test Execution section of the schedule are 100% completed at each cycle.

|  |  |  |  |
| --- | --- | --- | --- |
| **Exit Criteria** | **Test Team** | **Technical Team** | **Notes** |
| 100% Test Scripts executed |  | **✓** |  |
| 95% pass rate of Test Scripts |  | **✓** |  |
| No open Critical and High severity defects |  | **✓** |  |
| 95% of Medium severity defects have been closed |  | **✓** |  |
| All remaining defects are either cancelled or documented as Change Requests for a future release |  | **✓** |  |
| All expected and actual results are captured and documented with the test script |  | **✓** |  |
| All test metrics collected based on reports |  | **✓** |  |
| All defects logged in JIRA |  | **✓** |  |
| Test Closure Memo completed and signed off |  | **✓** |  |
| Test environment cleanup completed and a new back up of the environment | **✓** |  |  |



## Test Cycles

* + There will be two cycles for functional testing. Each cycle will execute all the scripts .
  + The objective of the first cycle is to identify any blocking, critical defects, and most of the high defects. It is expected to use some work-around in order to get to all the scripts.
  + The objective of the second cycle is to identify remaining high and medium defects, remove the work-around from the first cycle, correct gaps in the scripts and obtain performance results.
* UAT test will consist of one cycle.

## Validation and Defect Management

* It is expected that the testers execute all the scripts in each of the cycles described above.
* The defects will be tracked through JIRA only. The technical team will gather information on a daily basis from JIRA, and request additional details from the Defect Coordinator. The technical team will work on fixes.
* It is the responsibility of the tester to open the defects, link them to the corresponding script, assign an initial severity and status, retest and close the defect; it is the responsibility of the Defect Manager to review the severity of the defects and facilitate with the technical team the fix and its implementation, communicate with testers when the test can continue or should be halt, request the tester to retest, and modify status as the defect progresses through the cycle; it is the responsibility of the technical team to review JIRA on a daily basis, ask for details if necessary, fix the defect, communicate to the Defect Manager the fix is done, implement the solution per the Defect Manager request.

Defects found during the Testing will be categorized according to the bug-reporting tool “JIRA” and the categories are:

|  |  |
| --- | --- |
| **Severity** | **Impact** |
| 1 (Critical) | * This bug is critical enough to crash the system, cause file corruption, or cause potential data loss * It causes an abnormal return to the operating system (crash or a system failure message appears). * It causes the application to hang and requires re-booting the system. |
| 2 (High) | * It causes a lack of vital program functionality with workaround. |
| 3 (Medium) | * This Bug will degrade the quality of the System. However there is an intelligent workaround for achieving the desired functionality - for example through another screen. * This bug prevents other areas of the product from being tested. However other areas can be independently tested. |
| 4 (Low) | * There is an insufficient or unclear error message, which has minimum impact on product use. |
| 5(Cosmetic) | * There is an insufficient or unclear error message that has no impact on product use. |

## Test Metrics

Test metrics to measure the progress and level of success of the test will be developed and shared with the project manager for approval. The below are some of the metrics

* All testing will be conducted under the direct supervision of the Test Co-ordinator. If the Test Co-ordinator cannot travel to a particular location (for example, if testing is being conducted in more than one location at once), a subordinate is to be delegated as Site Test Co-ordinator.
* Burndown chart ; How to build?
* Define how much work is done, passed period, current team speed
* Calculate target team speed = target scope/ whole project period
* Build table with scope decreasing with current and target team speed
* Build chart based on table data

**Auto-tests metrics:**

* the test duration
* requirement coverage
* passed/failed cases,
* Found defects + PROD defects

## Defect tracking & Reporting

### Test Report

* Daily/weekly report will be provided by Testing team
* All reports are in HTML form
* Performance test reports should be provided separately

### Defect Tracking

Following flowchart depicts Defect Tracking Process:

# TEST ENVIRONMENT

--DEV – e2e tests will be run on dev env once the development codes are deployed to dev.

--QA – e2e tests will be run on qa env once the development codes are deployed to qa.

UAT – e2e tests will be run on uat env once the development codes are deployed to uat.

# TESTING TOOLS

## Test Management Tools

JIRA will be used to track issues, fixes and resolution.

## Test Automation Tools

|  |  |
| --- | --- |
| Web services management tool | Postman |
| Performance | Artillery package for automation |
| CI/CD | Need to be clarified |
| Version Control | GIT |

## Test Automation Technologies

|  |  |  |
| --- | --- | --- |
| Webdriver | Protractor/selenum |  |
| BDD test | Mocha/Chai |  |
| Scripting | JavaScript |  |
| Task Runner | NPM |  |
| Asynchron Javascript | NodeJS |  |
| Reporting | mochaAwesome npm package | Generate reports in html format |
| Web-Service test | Supertest npm package |  |
| Performance Test | Artillery package |  |

# APPROVALS

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