Document Version History

Version #	Date	Author	Description of Change
1.0	10-01-2023	**Jeyeline**	Draft
2.0	17-01-2023		

Approvers List

Name	Role	Reviewer/ Approver	Reviewed /Approved Date
Mr.Muthuraj Muthiah	Director	Reviewer & Approver	

Reference Document

Version	Date	Document Name
		Process Document for quality assurance
		Test Plan Testing
		Checklist for test plan

CONTENTS

Introduction

This Test Plan aims to facilitate effective planning, control, and management of all testing related to *the implementation of parallel API integration in the Document Module of the Employee Portal*. By

explaining what is involved, what the risks are, and what resources are needed to test the system successfully, it serves as a channel of communication for all project participants. It also insists on the requirements for testing the system, including what is inside scope, what is outside scope, and what the objectives and deliverables are for the system under test thereby helping to prepare the testing methods necessary to assure the maximum level of project success.

Scope

The Scope of the project is to integrate the new API functionality by preserving the existing API's functionality.

Inclusions/Exclusions

The following section lists the features of the test item(s) to be tested.

Inclusion

*For **UCP- API integration in the Document Module of the Employee Portal** the features/functions to be tested or retested* comprise of specific attributes of software, functions, and interfaces that *include:*

- *Workflows*
- *User interface screens*
- *Existing Upload and Download Functionality*

Exclusion

The following features/functions are listed in the project as not being tested or falling outside the scope of testing:

- *Apart from what is specified in the previous section.*
- *No other module of the employee portal*
- *Update feature of DM*

Test Strategy

The test plan of the project, *Parallel API Integration in DM of UCP* outlines the testing process and clarifies any problems that might affect the project's success. There will be entry criteria, exit criteria, and deliverables for each testing activity.

Test Design Approach

The abstract test objectives are translated into concrete test scenarios and test cases. The objective of DMS API Integration is classified into two modules

1. Employee Uploading a Document
2. Download the document at the customer site as well as the employee's portal

Verification Approach

For ensuring the requirements have been met, formal/informal verification will be performed on the technical team's work products without actually running the software. The review areas may include but are not limited to, requirements, design, testing, implementation, and maintenance.

Requirements Review

The requirements for the API parallel integration in Document Module are defined and documented and reviewed by key project stakeholders (e.g., business analysts, technical team) for understanding and agreeing to the system's requirements.

Entry/Exit Criteria

Entry criteria are the conditions which the product must meet in order to enter Requirements Review. Exit criteria are the conditions the product must meet to complete the Requirements Review.

CRITERIA	DESCRIPTION
Entry	• *Requirements Document*
Exit	• *Requirements are clearly defined, testable, and traceable.*

Deliverable(s)

DELIVERABLE	DUE DATE
• *Approved Requirements*	

Use Case Review

Documented use cases should be reviewed with the key project stakeholders including the program area to ensure that all business workflows, processes, and rules are accurate and complete for the system being developed.

Entry/Exit Criteria

CRITERIA	DESCRIPTION
Entry	• *Use cases have been documented according to IT standards (e.g., template) as defined by the project.*
Exit	• *Use cases have been reviewed and approved by the project team (e.g., business, technical, testers).*

Deliverable(s)

DELIVERABLE	DUE DATE
• *Approved Use Cases*	

Test Document Review

Test Document Review is validating the quality of the documentation for the system. In this project, document review artifacts may include, but are not limited to API Specifications Report, Test Plan, Test Case Document

The Entry/Exit Criteria for the test document review phase are:

Entry/Exit Criteria

CRITERIA	DESCRIPTION
Entry	• *Approved Requirements*
Exit	• *Test documents have been reviewed and approved by the project team (e.g., business, technical, testers).*

Deliverable(s)

TEST ACTIVITY/DELIVERABLE	DUE DATE
• *Test documents such as Test Plans that have been approved by authorized stakeholders*	

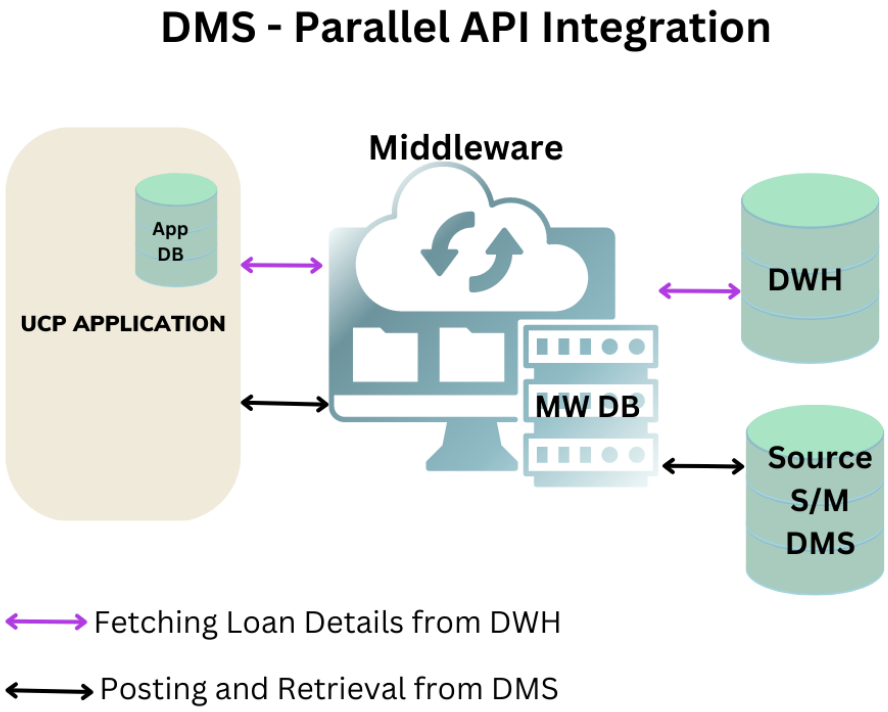
Validation Approach

Validation is defined as the confirmation by examination and through the provision of objective evidence that the requirements for a specific intended use or application have been fulfilled. Validation involves the actual testing of the software product. Validation is reactive as the emphasis is defect detection, whereas verification focuses on defect prevention.

Test validation is a critical component in the software lifecycle. The system under test is being validated to ensure that the system meets the requirements. Further, the results of test validation will assist the project in determining if the business objectives for the system have been met.

Integration test

Integration testing has to be performed to expose defects in the interfaces and the interactions between integrated components or systems (i.e. component integration testing, system integration testing). Interactions between software components can be verified by Component integration testing.



Entry/Exit Criteria

CRITERIA	DESCRIPTION
Entry	*Approved Test Documents*
Exit	*Evidence that all severity 1 (critical) and severity 2 (major) user acceptance test defects are closed. All remaining open defects have*

CRITERIA	DESCRIPTION
	been either deferred or dispositions made per mutual agreement between the business and development teams.

Deliverable(s)

DELIVERABLE	DUE DATE
Test Summary Report	

User acceptance Test

In User Acceptance Test (UAT) the DMS API feature should be compared with the user requirements and demonstrate that those requirements have been satisfied. The customers or end users will have to perform UAT to ensure the application meets the business requirements. Once the UAT entrance criteria have been met, UAT will begin with the customers or end users testing the software in a pre-production environment (e.g., Acceptance Environment) for a specified period. The user Acceptance Test will conclude once the UAT exit criteria have been met.

It must include 1. Regression Tests 2. Usability Test to determine the extent to which the featured product is understood, easy to learn, easy to operate, and attractive to the users under specified conditions.

APPLICATIONS NEEDING REGRESSION TEST	INITIAL LIST OF REGRESSION TEST CASES	ANY SPECIAL TEST OBJECTIVES
Document Module of Employee portal	1. Upload- Employee 2. Download – Customer and Employee 3. Document Type visibility criteria at the customer end 4. Upload and Download API and DB Test	

Entry/Exit Criteria

CRITERIA	DESCRIPTION
Entry	• *Evidence that system test goals were completed successfully per the System Test Plan.* • *Testers were trained on the system under test before UAT commencement.*
Exit	• *Evidence that all severity 1 (critical) and severity 2 (major) user acceptance test defects are closed. All remaining open defects have been either deferred or dispositions made per mutual agreement between the business and development teams.*

Deliverable(s)

DELIVERABLE	DUE DATE
• *Test Summary Report* • *Approved User Acceptance Test*	

Non-Functional Testing

This testing guarantees that UCP application is reliable and capable of managing file uploads.

SYSTEM TEST CATEGORY	REQUIRED: (Y)-YES (N)-NO	ANY SPECIAL TEST OBJECTIVE
Volume Test	N	
Load Test		Permissible file size limit
Stress Test	N	
Security Test	N	
Usability Test	N	
Performance Test	N	
Resource Utilization Test	N	
Configuration Test	N	
Compatibility/Conversion Test	N	
Install Ability Test	N	
Failover/Recoverability Test	N	

SYSTEM TEST CATEGORY	REQUIRED: (Y)-YES (N)-NO	ANY SPECIAL TEST OBJECTIVE
Serviceability/Maintainability Test	N	
Reliability Test	N	
Scenario Test	N	
System Integration Test	N	
Operational Test	N	

It includes regression tests, which retest previously tested features to ensure that the change or bug fix has not affected any part of the software application. Any defects found in the regression test will need to be scheduled for a retest.

Entry/Exit Criteria

CRITERIA	DESCRIPTION
Entry	• *Evidence that integration test goals were completed successfully per the Integration Test Plan.*
Exit	• *Evidence that all severity 1 (critical) and severity 2 (major) system test defects are closed. All remaining open defects have been either deferred or dispositions made per mutual agreement between the business and development teams.*

Deliverables

DELIVERABLE	DUE DATE
• *Test Summary Report*	

Defect Management

By using the below processes, the escalation process for handling issues and concerns regarding incidents and defects of the project will be handled.

- ***Defect Management Tool Used – Azure DevOps, JIRA***
- ***Defect Triage, Defect Resolution, and Escalation Process***

It includes:

1. *Resources of Bluescope IT team*
2. *MF IT Team*
3. *TCS Network Team*
4. *TCS DB Team*
5. *DMS Team*

The defect Triage meeting will comprise the respective team corresponding to the issue encountered.

Metrics and Reporting

Reports have to be prepared to compare the actual results to that which was planned using metrics and other relevant information. These Reports are used as a means to effectively communicate to project stakeholders the progress of testing

Test Metrics:

- *Percentage of completed tests*
- *Number of tests that passed, failed or were unable to progress because of blocking defects*
- *Number of outstanding defects (measured by severity and by component)*
- *Rate of defect discovery (measured by severity and by component)*
- *Rate of defects being fixed compared to the discovery rate*
- *Number of defects after release*
- *Number of Active issues*

Test Data Requirements

Test data is selected to satisfy the input requirements for executing one or more test cases, which could be defined in a Test Plan. Test data may be stored within the product under test, or could be available from or supplied by external sources, such as other systems, other system components, hardware devices, or human operators.

Test Data to validate the functionality of DMS API should be of

1. Employee Credentials

2. Selected Customer for whom the document is uploaded.

Test Environment AND Facilities Requirements

Here is an exposition of the test environment for UCP-DMS API Integration, which comprises the hardware, instrumentation, simulators, software tools, and other support elements required to conduct a test. The necessary components for the test environment, including hardware (such as servers and workstations), software (such as Oracle eBusiness and Adobe Reader), testing tools (such as defect management systems), databases (such as Oracle), and personnel (e.g., system administrator, testing resources) are explained below:

SYSTEM RESOURCE	QUANTITY
Web Server	
Application Server	
Database Server – DMS, DWH, UCP, MW	
Log Access	

HARDWARE/ SOFTWARE	SPECIFICS
Computer	
Browser	
Adobe Reader	

TOOL CATEGORY	TOOL NAME
Test Management	*Azure DevOps*
Requirements Management	*MS Office*
Defect Tracking	*Azure DevOps*
Other Tools	*Putty, WinScp*
API test	*Postman*

Test Schedule

The project schedule serves as a roadmap for the test team and illustrates the dependencies, relationships, constraints, resources, and time estimates for each activity relative to the overall project phases. The below project schedule shows the aligned test tasks, activities, and milestones

with the test strategy for the system under test.

Tasks	Responsible	Start	End	Days	Status	10-31	11-1	11-2	11-3	11-4	11-5
31-10-2022											
Set kick-off meeting	Mamtha	31-Oct	31-Oct	0	Complete						
Agree on objectives	Mamtha	01-Nov	01-Nov	0	Complete						
Initiation											
Detailed Reqs.	Lawrence	02-Nov	09-Nov	7	Complete						
Approvals	Mamtha	10-Nov	11-Nov	1	Complete						
Development											
Techincal Reqs.	Lawrence	14-Nov	18-Nov	4	Complete						
DB Development	Lawrence	14-Nov	14-Nov	0	Complete						
API Development	Selvakumar	15-Nov	18-Nov	3	Complete						
UI Client	Jeyeline	19-Nov	19-Nov	0	Complete						
Testing	Jeyeline	21-Nov	23-Nov	2	Complete						
Defect Triage	Team	24-Nov	28-Nov	4	Complete						
Migration	Lawrence	29-Nov	29-Nov	0	Complete						
UAT Testing											
UAT Testing	Jeyeline	30-Nov	02-Dec	2	Overdue						
Regression Testing	Jeyeline	03-Dec	09-Dec	6	Not Started						
Performance Testing	Lawrence	12-Dec	13-Dec	1	Not Started						

Task Name	Start	Finish	Effort	Comments
Test Planning				
Review Requirements documents			2 d	
Create initial test estimates			1 d	
Staff and train new test resources				
Test Plan, Test Case Preparation				
Functional testing – Iteration 1				
Iteration 2 deploy to the QA test environment				
Functional testing – Iteration 2				

System testing				
Regression testing				
UAT				
Resolution of final defects and final build testing				
Deploy to a Staging environment				
Performance testing				
Release to Production				

Suspension/Resumption Criteria

Suspension criteria defines the criteria used to temporarily stop all or a portion of the testing activities on the test item (e.g., component of the system to be tested). Resumption criteria define the conditions used to restart all or a portion of the testing activities that were suspended previously.

SUSPENSION/RESUMPTION CRITERIA

CRITERIA	DESCRIPTION	RESPONSIBLE PARTY
Suspension	• *The unavailability of an external dependent connection to the system (DMS) during system integration testing will result in testing suspension.*	*Mamtha Gali, Project Manager, and MF IT Head*
Resumption	• *Testing will begin only after the required connection is established between the systems.*	*Mamtha Gali, Project Manager, and MF IT Head*

RESUMPTION DELIVERABLE

RESUMPTION TEST ACTIVITY	ASSIGNED TO	DUE DATE
Refresh the test environment that ensures a proper connection	*Lawrence*	
Review test cases and test data to verify external dependent system readiness. Coordinate testing resources at the external department to test system functionality.		

Risks / Assumptions

The possible risks identified from the requirement process and the mitigation procedures for this project are detailed below.

The test-related project risks are identified and recommendations are provided to mitigate each risk. Risks are graded by level of severity as follows:

ITEM NUMBER	RISK	SEVERITY	CONTINGENCY/MITIGATION
1.	Restriction of log access	S-1	
2.	Server read-write access	S-1	
3.	API Connection Establishment (DMS)	S-1	
4.	MW Database Connection Failure/ Permission	S-2	
5.	Application Failure	S-1	

********** END OF DOCUMENT **********