QA Training Sessions

TEST PLAN

Assignment

Version 1.0

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Document History

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1.0	07/02/2023	Keerthi Kodali	Initial Draft Version

Test Plan

have carefully assessed the Test Plan for the Assignment. This document has been completed accordance with the requirements of the USSM Guidance.				
MANAGEMENT CERTIFICATION				
The document is accepted.				
We fully accept the content within this project	artifact and associated tasks.			
Keerthi Kodali	07-02-2023			
Quality Analyst				

Contents

CC	ntents	3		4
1.	O,	vervi	ew	9
	1.1.	Pro	ect Background	9
	1.2.	Pur	pose and Scope	9
	1.3.	Ass	umptions/Constraints	9
	1.4.	Rol	es and Responsibilities	9
	1.5.	Trai	ning Needs	10
2.	Te	st E	nvironmental and Tool Needs	11
:	2.1.	Tes	t Environments	11
:	2.2.	Env	ironmental Diagrams	11
:	2.3.	Tes	t Support Tools	11
3.	O,	vera	II Test Approach and Process	12
;	3.1.	Tes	ting Phases	12
	3.1.	1.	Test Planning	12
	3.1.	2.	Test Definition	12
	3.1.	3.	Test Execution	12
;	3.2.	Ove	erall Test Strategy	12
	3.2.	1.	Criteria for entering, exiting, and suspending testing	13
	3.2.	2.	Testing Traceability	13
	3.2.	3.	Testing Issues	13
	3.2.	4.	Testing Principles	13
4.	Uı	nit Te	est	14
	4.1.	Unit	Test Objectives	14
	4.1.	1.	Test Items in Scope	14
	4.1.	2.	High-Level Test Scenarios	14
	4.1.	3.	Test Items Not in Scope	14
	4.2.	Unit	Test Approach	14
	4.2.	1.	Test Preparation Activities	15
	4.2.	2.	Test Execution Activities	15
	4.2.	3.	Test Data Sources	15
	4.2.	4.	Test Deliverables	15
	4.2.	5.	Roles and Responsibilities	15
5.	In	tegra	ation Test	16

5.1. Inte	egration Test Objectives	16
5.1.1.	Test Items in Scope	16
5.1.2.	High-Level Test Scenarios	16
5.1.3.	Test Items Not in Scope	16
5.1.4.	External and Internal Systems and Components for Integration Testing	16
5.2. Inte	egration Test Approach	16
5.2.1.	Test Preparation Activities	17
5.2.2.	Test Execution Activities	17
5.2.3.	Test Data Sources	17
5.2.4.	Test Deliverables	17
5.2.5.	Roles and Responsibilities	17
6. Syste	m Test	18
6.1. Sys	stem Test Objectives	18
6.1.1.	Test Items in Scope	18
6.1.2.	High-Level Test Scenarios	18
6.1.3.	Test Items not in Scope	18
6.2. Sys	stem Test Approach	18
6.2.1.	Test Preparation Activities	18
6.2.2.	Test Execution Activities	19
6.2.3.	Test Data Sources	19
6.2.4.	Test Deliverables	19
6.2.5.	Roles and Responsibilities	19
7. User <i>i</i>	Acceptance Test	20
7.1. Use	er Acceptance Test Objectives	20
7.1.1.	Test Items in Scope	20
7.1.2.	High-Level Test Scenarios	20
7.1.3.	Test Items not in Scope	20
7.2. Use	er Acceptance Test Approach	20
7.2.1.	Test Preparation Activities	20
7.2.2.	Test Execution Activities	21
7.2.3.	Test Data Sources	21
7.2.4.	Test Deliverables	21
7.2.5.	Roles and Responsibilities	21
8. Perfoi	mance Test	22
8.1. Per	formance Test Objectives	22

8.1.1.	Test Items in Scope	22
8.1.2.	High-Level Test Scenarios	22
8.1.3.	Test Items not in Scope	22
8.2. Per	formance Test Approach	22
8.2.1.	Test Preparation Activities	23
8.2.2.	Test Execution Activities	23
8.2.3.	Test Data Sources	23
8.2.4.	Test Deliverables	23
8.2.5.	Roles and Responsibilities	23
9. Data (Conversion Test	24
9.1. Dat	a Conversion Test Objectives	24
9.1.1.	Test Items in Scope	24
9.1.2.	High-Level Test Scenarios	24
9.1.3.	Test Items not in Scope	24
9.2. Dat	a Conversion Test Approach	24
9.2.1.	Test Preparation Activities	25
9.2.2.	Test Execution Activities	25
9.2.3.	Test Data Sources	25
9.2.4.	Test Deliverables	25
9.2.5.	Roles and Responsibilities	25
10. Smoke	e Test	26
10.1. S	moke Test Objectives	26
10.1.1.	Test Items in Scope	26
10.1.2.	High-Level Test Scenarios	26
10.1.3.	Test Items not in Scope	26
10.2. S	moke Test Approach	26
10.2.1.	Test Preparation Activities	27
10.2.2.	Test Execution Activities	27
10.2.3.	Test Data Sources	27
10.2.4.	Test Deliverables	27
10.2.5.	Roles and Responsibilities	27
11. Regre	ssion Test	28
11.1. R	Regression Test Objectives	28
11.1.1.	Test Items in Scope	28
11.1.2.	High-Level Test Scenarios	28

11.1.3.	Test Items not in Scope	28	
11.2. F	Regression Test Approach	28	
11.2.1.	Test Preparation Activities	28	
11.2.2.	Test Execution Activities	29	
11.2.3.	Test Data Sources	29	
11.2.4.	Test Deliverables	29	
11.2.5.	Roles and Responsibilities	29	
12. Secur	rity Test	30	
12.1.	Security Test Objectives	30	
12.1.1.	Test Items in Scope	30	
12.1.2.	High-Level Test Scenarios	30	
12.1.3.	Test Items Not in Scope	30	
12.2.	Security Test Approach	30	
12.2.1.	Test Preparation Activities	30	
12.2.2.	Test Execution Activities	31	
12.2.3.	Test Data Sources	31	
12.2.4.	Test Deliverables	31	
12.2.5.	Roles and Responsibilities	31	
13. Section	on 508 Compliance Test	32	
13.1.	Section 508 Compliance Test Objectives	32	
13.1.1.	Test Items in Scope	32	
13.1.2.	High-Level Test Scenarios	32	
13.1.3.	Test Items not in Scope	32	
13.2.	Section 508 Compliance Test Approach	33	
13.2.1.	Test Preparation Activities	33	
13.2.2.	Test Execution Activities	33	
13.2.3.	Test Data Sources	33	
13.2.4.	Test Deliverables	33	
13.2.5.	Roles and Responsibilities	33	
14. Test F	Results	34	
14.1.	Communication and Tracking	34	
14.2. F	Required Testing Metrics	34	
15. Test S	Schedule	35	
Appendix A:	Key References	36	
Appendix B:	Appendix B: Key Terms 36		

1. Overview

1.1. Project Background

This document is reviewed and approved by both the Provider and the Customer Program Manager.

• This project, includes the purpose of system of Coffee Machine, a cooking device used to brew coffee is known as a coffeemaker, coffee maker, or coffee machine. The two most popular brewing principles use gravity or pressure to move hot water through coffee grounds despite the fact that there are many different types of coffeemakers., the functions perform the system is intended to fresher coffee taste, healthier coffee, convenient coffee preparation A creative way to make coffee. Also, describe the benefits of the new capability that aligns the new capability with strategic goals and mission objectives.

1.2. Purpose and Scope

The purpose and objectives of the Test Plan includes the following areas:

- System Test
- User Acceptance Test
- Performance Test
- Data Conversion Test
- Smoke Test
- Regression Test
- Security Test

1.3. Assumptions/Constraints

No assumptions

1.4. Roles and Responsibilities

Role	# of Resources Needed	Organization	Responsibility
Quality Analyst	• 10	Coffee Machine	 To perform functional testing
Test Lead	• 2	Coffee Machine	To handle and track team
Business Analyst	• 2	Coffee Machine	 Gather requirements from client
Developers	• 15	Coffee Machine	Work on source code

Table 1: Test Plan Roles and Responsibilities

1.5. Training Needs

Type or Training	Estimated Number of Resources	Date Needed By
Validation Rules for Testing team	1	07/02/2023

Table 2: Test Plan Training Needs

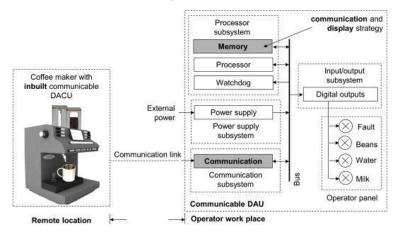
2. Test Environmental and Tool Needs

2.1. Test Environments

Environment Name	Description	Configuration	Test Type
Stage	URL	PC with Windows 11	Manual Testing

Table 3: Test Environments

2.2. Environmental Diagrams



2.3. Test Support Tools

Tool Category or Type	Tool Brand Name	Vendor or In-house	Version	Point of Contact for Access
Test Management Suite	JIRA	Micro focus	11	Admin Department

Table 4: Test Support Tools

3. Overall Test Approach and Process

3.1. Testing Phases

System Testing

3.1.1. Test Planning

Deliverable: Test Plan

3.1.2. Test Definition

<u>Deliverables</u>: Consolidated Test Case Document, Test Datasets

3.1.3. Test Execution

<u>Deliverable</u>: Test Report

3.2. Overall Test Strategy

Agile Methodology

3.2.1. Criteria for entering, exiting, and suspending testing

Entry criteria: System Testing

Exit criteria: User Acceptance Testing

3.2.2. Testing Traceability

Requirement Traceability Matrix (RTM)

3.2.3. Testing Issues

<u>Deliverable</u>: Issue Tracker

3.2.4. Testing Principles

Need to follow guidelines as provided by the client in SRS.

4. Unit Test

Unit test document

4.1. Unit Test Objectives

Power Button, Tamper, Storage Tray, Steam Wand, Hot Water Outlet, Power Switch modules

4.1.1. Test Items in Scope

Portafilter, Power Button, Power Switch modules

4.1.2. High-Level Test Scenarios

Power/voltage requirements of the machine

Machine can be switched on and off using the power buttons

Coffee beans are grinding evenly

Machine should work correctly in different climatic, moistures and temperature conditions

Water tank does not leak

Scenario ID#	Unit Test Scenario Description
Scenario 1	Verify the power/voltage requirements of the machine
Scenario 2	Verify the effect of suddenly switching off the machine or cutting the power. The machine should stop in that situation and in power resumption, the remaining coffee should not get come out of the nozzle.
Scenario 3	Check if the power button of the coffee vending machine is working correctly after pressing the power button.
Scenario 4	Verify the water tank does not leak: Pour water into the tank and check for any leaks.
Scenario 5	Verify the coffee beans are grinding evenly: Take a test bean and test how evenly it has been ground.
Scenario 6	Verify that machine should work correctly in different climatic, moistures and temperature conditions
Scenario 7	Check the functioning of coffee machine with a lesser or higher voltage than required
Scenario 8	Verify that the coffee vending machine should be started when the user presses the Power ON button.
Scenario 9	Verify that coffee vending machine should be off when the user press on power OFF button

Scenario ID#	Unit Test Scenario Description
Scenario 10	Verify that when the vending machine starts, the indicator lights should be working properly.
Scenario 11	Verify that the water level indicator should be working properly.

Table 5: Unit Test Scenarios

4.1.3. Test Items Not in Scope

Bean Hopper, Burrs Modules

4.2. Unit Test Approach

N/A

4.2.1. Test Preparation Activities

N/A

4.2.2. Test Execution Activities

N/A

4.2.3. Test Data Sources

N/A

Test Data Requirement	Source	Point of contacts
N/A	N/A	N/A

Table 6: Unit Test Data Sources

4.2.4. Test Deliverables

N/A

4.2.5. Roles and Responsibilities

Name	Role	Organization	Responsibility
N/A	N/A •	N/A •	N/A •
	•	•	•
	•	•	•

Table 7: Unit Test Roles and Responsibilities

5. Integration Test

N/A

5.1. Integration Test Objectives

N/A

5.1.1. Test Items in Scope

N/A

5.1.2. High-Level Test Scenarios

N/A

Scenario ID#	Integration Test Scenario Description
1	Verify end to end test for making a cup of coffee : Pour in coffee grinds, add hot water and test whether or not you get a cup of coffee.
2	Verify multiple cups of coffee can be dispensed at once: Make more than one cup of coffee and test to see if they are all made correctly. Note: Some machines can dispense more than one coffee at a time.
3	Cleaning the coffee machine test cases: – Verify the coffee machine for any leaks after cleaning
4	Cleaning the coffee machine test cases: – Verify that all parts have been cleaned properly
5	Cleaning the coffee machine test cases: – Verify that there is no water left in the coffee machine
6	Cleaning the coffee machine test cases: – Verify that the coffee machine is dry after cleaning
7	Test cups for leakage: Place a cup under the coffee machine and test to see if any coffee leaks out.
8	Test overall functionality of the coffee machine: Make a cup of coffee and test to see if it is made correctly. Note: You could potentially use a test like this as a stand up.

Table 8: Integration Test Scenarios

5.1.3. Test Items Not in Scope

N/A

5.1.4. External and Internal Systems and Components for Integration Testing

5.2. Integration Test Approach

N/A

5.2.1. Test Preparation Activities

N/A

5.2.2. Test Execution Activities

N/A

5.2.3. Test Data Sources

N/A

Test Data Requirement	Source	Point of contacts
N/A	N/A	N/A

Table 9: Integration Test Data Sources

5.2.4. Test Deliverables

N/A

5.2.5. Roles and Responsibilities

Name	Role	Organization	Responsibility
N/A	N/A	N/A	N/A
	•	•	•
	•	•	•
	•	•	•

Table 10: Integration Test Roles and Responsibilities

6. System Test

6.1. System Test Objectives

System Testing is performed on the entire system to validate the application's accuracy and completeness in meeting the established requirements. Test the design of the system and the behavior of the system.

6.1.1. Test Items in Scope

Water tank, Coffee beans, Power ON /OFF button, indicator light, Auto cleaner facility, safety lock system

6.1.2. High-Level Test Scenarios

Verify the water tank does not leak: Pour water into the tank and check for any leaks.

Verify the coffee beans are grinding evenly: Take a test bean and test how evenly it has been ground.

Verify that the coffee vending machine should be started when the user presses the Power ON button and coffee vending machine should be off when the user press on power OFF button.

Verify the indicator lights are displaying correctly when the coffee vending machine is going to switch off or on.

Verify that the auto cleaner facility is working properly or not

Verify that the safety lock system is available or not.

Scenario ID#	System Test Scenario Description
1	Water tank does not leak (The water remains inside the tank and no leaks occur)
2	 Verify the coffee beans are grinding evenly (All coffee beans should be consistently be evenly grounded)
3	Verify that the coffee vending machine Power Button (ON/ OFF)
4	 Verify the indicator lights (displaying correctly when the coffee vending machine is going to switch off or on)
5	Verify cleaner (cleaner should work properly for the coffee vending machine)
6	Verify that the safety lock system (available or not)

Scenario ID#	System Test Scenario Description

Table 11: System Test Scenarios

6.1.3. Test Items not in Scope

N/A

6.2. System Test Approach

Need check water tank, coffee beans, power button, indicator lights, auto cleaner facility, safety lock system **are successful according to norms**.

6.2.1. Test Preparation Activities

Conduct planning and preparation sessions for developing scenarios and kicking off the effort.

6.2.2. Test Execution Activities

Test data preparation, Test case development for System Test execution.

6.2.3. Test Data Sources

Need to use JIRA tool for test data preparation.

Test Data Requirement	Source	Point of contacts
GPM tool test data	JIRA tool	GPM team

Table 12: System Test Data Sources

6.2.4. Test Deliverables

Test cases documents

6.2.5. Roles and Responsibilities

Name	Role	Organization	Responsibility
Keerthi Kodali	• QA	CoffeeMachine	Perform Validation testing

Name	Role	Organization	Responsibility
Divya	• QA	Coffee Machine	Perform Validation testing
Anisha	• QA	Coffee Machine	Perform Validation testing

Table 13: System Test Roles and Responsibilities

7. User Acceptance Test

7.1. User Acceptance Test Objectives

User wants a small cup of coffee with milk and sugar.

7.1.1. Test Items in Scope

coffee ingredients, quantity of hot water, milk, coffee powder

7.1.2. High-Level Test Scenarios

Verify that the quantity of hot water, milk, coffee powder

Verify the input mechanism for coffee ingredients

Verify the amount of coffee served

Scenario ID#	UAT Scenario Description
1	Verify the coffee machine should dispense; coffee for he equivalent a small cup. Coffee that contains milkCoffee that contains sugar. The coffee should look and taste like coffee.
2	Verify the input mechanism for coffee ingredients-milk, water, coffee beans/powder, etc
3	Verify that the quantity of hot water, milk, coffee powder per serving is correct
4	Verify the amount of coffee served in single-serving is as per specification

Table 14: UAT Scenarios

7.1.3. Test Items not in Scope

N/A

7.2. User Acceptance Test Approach

7.2.1. Test Preparation Activities

N/A

7.2.2. Test Execution Activities

N/A

7.2.3. Test Data Sources

N/A

Test Data Requirement	Source	Point of contacts
N/A	N/A	N/A

Table 15: UAT Data Sources

7.2.4. Test Deliverables

N/A

7.2.5. Roles and Responsibilities

Name	Role	Organization	Responsibility
N/A	N/A	N/A	N/A
	•	•	•
	•	•	•

Table 16: UAT Roles and Responsibilities

8. Performance Test

8.1. Performance Test Objectives

N/A

8.1.1. Test Items in Scope

device's performance continuously

8.1.2. High-Level Test Scenarios

Check the device's performance continuously
Check the performance of the coffee vending machine
Check the number of times the machine takes to service a single coffee.

Scenario ID#	Performance Test Scenario Description
1	Check the device's performance continuously until the ingredients run out of the requirements.
2	Check the performance of the coffee vending machine when there is low voltage or high voltage.
3	Check the number of times the machine takes to service a single coffee.

Table 17: Performance Test Scenarios

8.1.3. Test Items not in Scope

8.2. Performance Test Approach

N/A

8.2.1. Test Preparation Activities

N/A

8.2.2. Test Execution Activities

N/A

8.2.3. Test Data Sources

N/A

Test Data Requirement	Source	Point of contacts
N/A	N/A	N/A

Table 18: Performance Test Data Sources

8.2.4. Test Deliverables

N/A

8.2.5. Roles and Responsibilities

Name	Role	Organization	Responsibility
N/A	N/A	N/A	N/A
	•	•	•
	•	•	•
	•	•	•

Table 19: Performance Test Roles and Responsibilities

9. Data Conversion Test

9.1. Data Conversion Test Objectives

N/A

9.1.1. Test Items in Scope

N/A

9.1.2. High-Level Test Scenarios

N/A

Scenario ID#	Data Conversion Test Scenario Description
N/A	N/A

Table 20: Data Conversion Test Scenarios

9.1.3. Test Items not in Scope

N/A

9.2. Data Conversion Test Approach

N/A

9.2.1. Test Preparation Activities

N/A

9.2.2. Test Execution Activities

9.2.3. Test Data Sources

N/A

Test Data Requirement	Source	Point of contacts
N/A	N/A	N/A

Table 21: Data Conversion Test Data Sources

9.2.4. Test Deliverables

N/A

9.2.5. Roles and Responsibilities

Name	Role	Organization	Responsibility
N/A	N/A	N/A	N/A
	•	•	•
	•	•	•

Table 22: Data Conversion Test Roles and Responsibilities

10. Smoke Test

10.1. Smoke Test Objectives

Validate the main functionalities for in-scope modules (Water tank, Coffee beans, Power ON /OFF button, indicator light, Auto cleaner facility, safety lock system')

10.1.1. Test Items in Scope

N/A

10.1.2. High-Level Test Scenarios

Verify the water tank does not leak: Pour water into the tank and check for any leaks.

Verify the coffee beans are grinding evenly: Take a test bean and test how evenly it has been ground.

Verify that the coffee vending machine should be started when the user presses the Power ON button and coffee vending machine should be off when the user press on power OFF button.

Verify the indicator lights are displaying correctly when the coffee vending machine is going to switch off or on.

Verify that the auto cleaner facility is working properly or not

Verify that the safety lock system is available or not.

Scenario ID#	Smoke Test Scenario Description
1	Water tank does not leak (The water remains inside the tank and no leaks occur)
2	Verify the coffee beans are grinding evenly (All coffee beans should be consistently be evenly grounded)
3	Verify that the coffee vending machine Power Button (ON/ OFF)
4	Verify the indicator lights (displaying correctly when the coffee vending machine is going to switch off or on)
5	Verify cleaner (cleaner should work properly for the coffee vending machine)

Table 23: Smoke Test Scenarios

10.1.3. Test Items not in Scope

Settings Module

10.2. Smoke Test Approach

Performed on the end of each sprint.

10.2.1. Test Preparation Activities

N/A

10.2.2. Test Execution Activities

Proof of evidence is provided.

10.2.3. Test Data Sources

Provided from GPM tool.

Test Data Requirement	Source	Point of contacts
GPM test data	GPM tool	GPM team

Table 24: Smoke Test Data Sources

10.2.4. Test Deliverables

Test Evidence document

10.2.5. Roles and Responsibilities

Name	Role	Organization	Responsibility
Keerthi Kodali	• QA	Coffee Machine	Performs smoke test
	•	•	•
	•	•	•

Table 25: Smoke Test Roles and Responsibilities

11. Regression Test

11.1. Regression Test Objectives

N/A

11.1.1. Test Items in Scope

N/A

11.1.2. High-Level Test Scenarios

Scenario ID#	Regression Test Scenario Description

Table 26: Regression Test Scenarios

11.1.3. Test Items not in Scope

N/A

11.2. Regression Test Approach

Perform regression testing after end of final sprint.

11.2.1. Test Preparation Activities

Identify old test cases from ALM tool

11.2.2. Test Execution Activities

N/A

11.2.3. Test Data Sources

Test data extracted from JIRA tool.

Test Data Requirement	Source	Point of contacts
GPM test data	GPM tool	GPM team

Table 27: Regression Test Data Sources

11.2.4. Test Deliverables

Proof of evidence document

11.2.5. Roles and Responsibilities

Name	Role	Organization Responsibility	
Keerthi Kodali	• QA	Coffee Machine	Performs regression testing
	•	•	•
	•	•	•

Table 28: Regression Test Roles and Responsibilities

12. Security Test

12.1. Security Test Objectives

N/A

12.1.1. Test Items in Scope

N/A

12.1.2. High-Level Test Scenarios

N/A

Scenario ID#	Security Test Scenario Description

Table 29: Security Test Scenarios

12.1.3. Test Items Not in Scope

N/A

12.2. Security Test Approach

N/A

12.2.1. Test Preparation Activities

N/A

12.2.2. Test Execution Activities

12.2.3. Test Data Sources

N/A

Test Data Requirement	Source	Point of contacts

Table 30: Security Test Data Sources

12.2.4. Test Deliverables

N/A

12.2.5. Roles and Responsibilities

Name	Role	Organization	Responsibility	
	•	•	•	
	•	•	•	
	•	•	•	

Table 31: Security Test Roles and Responsibilities

13. Section 508 Compliance Test

13.1. Section 508 Compliance Test Objectives

N/A

13.1.1. Test Items in Scope

N/A

13.1.2. High-Level Test Scenarios

N/A

Scenario ID#	Section 508 Compliance Test Scenario Description

Table 26: Section 508 Compliance Test Scenarios

13.1.3. Test Items not in Scope

N/A

13.2. Section 508 Compliance Test Approach

N/A

13.2.1. Test Preparation Activities

N/A

13.2.2. Test Execution Activities

13.2.3. Test Data Sources

N/A

Test Data Requirement	Source	Point of contacts

Table 27: Section 508 Compliance Test Data Sources

13.2.4. Test Deliverables

N/A

13.2.5. Roles and Responsibilities

N/A

Name	Role	Organization	Responsibility	
	•	•	•	
	•	•	•	
	•	•	•	

Table 28: Section 508 Compliance Test Roles and Responsibilities

14. Test Results

Test Summary Report Document

14.1. Communication and Tracking

• Reporting and tracking for defects with severity and priority level assigned.

14.2. Required Testing Metrics

Defect Summary Report Document

15. Test Schedule

Milestone	Planned Start Date	Actual Start Date	Planned End Date	Actual End Date
Payment Module	4/20/2019	4/22/2019	4/23/2019	4/24/2019
Search Module	4/21/2019	4/22/2019	4/23/2019	4/23/2019

Table 32: Test Schedule

Appendix A: Key References

Table below summarizes the documents referenced in this document.

Document Name	Description	Location
Document Name and Version Number	Document description	URL to where document is located

Table 33: Key References

Appendix B: Key Terms

Table below provides definitions and explanations for terms and acronyms relevant to the content presented within this document.

Term	Definition

Table 34: Key Terms