PDS B15.1 TRR

PDS Engineering Node

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1 Review Board

Review Board Chair	Jamie Seung Shin
Chief Engineer	Michele Vogt
Deputy Chief Engineer	Kyran Owen-Mankovich
Assurance Engineer	Eva Bokor
Security Systems Engineer	Mike Pajevski
Task Manager	Jordan Padams
Test Engineer	Catherine Suh/Richard Chen/Ron Joyner
Other Stakeholders	TBD - PDS Project Office Dan Scholes - Geoscience Node at Wash U Mike Drum – SBN at Planetary Science Institute Jason Kang - Cartography and Imaging Sciences Node

2 Software Overview

Work Product	Documentation
Test Plan	(1) https://cae-testrail.jpl.nasa.gov/testrail/index.php?/plans/view/49478 • (a) B15.1 - Manual Tests - Requirements - TestRail.20250407.pdf[1] • (b) B15.1 - Manual Tests - Bugs - Critical - TestRail.20250407.pdf[2] • (c) B15.1 - Manual Tests - Bugs - High - TestRail.20250407.pdf[3]
Release Plan	https://github.com/orgs/NASA-PDS/projects/14/views/1
Test Procedures	*See Testrail*
Test Anomaly & Issues (GitHub Issues)	Issues are tracked under each individual component repository, e. g. https://github.com/NASA-PDS See Release Description for links to specific repositories.

Test Support Tools	• Testrail 8.0.6: test report repository
	• Public GitHub: test definition
	• Automated tests with:
	  • newman 5.3.1: web API tests
	  • cucumber 7.22.0: java applications
	  • pytest 7.4.0: python application tests

Test Report	*See Testrail after testing is completed*
System Deployment Guide	See individual tool Installation Guides.
Release Description	https://nasa-pds.github.io/releases/15.1/rdd.html

1 https://wiki.jpl.nasa.gov/download/attachments/1069091837/B15.1%20-%20Manual%20Tests%20-%20Requirements%20-%20TestRail.20250407.pdf?api=v2&modificationDate=1744048981000&version=1
2 https://wiki.jpl.nasa.gov/download/attachments/1069091837/B15.1%20-%20Manual%20Tests%20-%20Bugs%20-%20Critical%20-%20TestRail.20250407.pdf?api=v2&modificationDate=1744049003000&version=1
3 https://wiki.jpl.nasa.gov/download/attachments/1069091837/B15.1%20-%20Manual%20Tests%20-%20Bugs%20-%20High%20-%20TestRail.20250407.pdf?api=v2&modificationDate=1744049015000&version=1

3 Commitments / Improvements / Defect Corrections / Sustaining Activities

See B15.1 RDD[4]. Any tasks that are either "yellow" or "green" in the I&T column are either sub-tasks of a larger requirement / bug fix, or a sustaining task that require testing.

4 https://nasa-pds.github.io/releases/15.1/rdd.html

4 Other

None

5 Documentation

These are not explicitly denoted in the RDD or task descriptions. Any documentation updates requiring I&T inspection will be tagged the same as other improvements.

6 Test Objectives

Ensure modified tools are

- Functioning correctly
- Meeting user needs
- Meeting requirements

7 Test Environment

- Command line tools will be tested on the terminal app in Mac OS.
- When testing API calls, the server will be launch in the docker container.
- Dev team is developing/testing on the dev server with developer's test data, and I&T team is testing on docker servers with test data included.

The software tested can be run on any machine with sufficient resources. At EN:

- Macbook running macOS 14.6.1, 32GB memory
- Macbook running macOS 14.7, 64GB memory
- pds-int.jpl.nasa.gov[5], Oracle Linux 8.8, 16GB memory
- pds-int-win, Windows Server 2022, 18 GB memory
- Docker container, Debian GNU/Linux 11 (bullseye)

5 http://pds-int.jpl.nasa.gov

8 Key/New Test Cases

See B15.1 RDD[6].

6 https://nasa-pds.github.io/releases/15.1/rdd.html

9 Test Personnel

Person	Role	Assignment	Availability
Catherine Suh	EN I&T Tester	PDS I&T	0.5/40
Richard Chen	EN I&T Tester	PDS I&T	0.5/40
Ron Joyner	EN I&T Tester	PDS I&T	as needed

10 Test Effort Rationale

- The total estimated time to prepare and execute the test procedures is 35 days.
- With three part time testing engineers, it will take about four weeks to finish the tests.

#	Test ID	Mission	Tester	Hours to Prepare and Run Tests	Days to Prepare and Run Tests
1	PDS4 Information Model	PDS	RJoyner	120	15
2	validate	PDS	RChen	80	10
3	other automated tests (i.e., PEPPI, registry-api)	PDS	CSuh	16	2
4	all manual tests - requirements	PDS	CSuh	28	3.5
5	all manual tests - bugs - critical	PDS	CSuh	16	2
6	all manual tests - bugs - high	PDS	CSuh	20	2.5
				Total 280 hours	Total 35 days

11 Test Constraint And Risks

These planned tests fully depend on Registry Docker fully functioning, including bringing up swagger web and loading test data from existing test folders.

- IF software changes and fixes come in THEN those tests will need to be rerun WITH LIKELIHOOD of 90% and CONSEQUENCE OF resetting the number of days needed for testing.

12 Action Item Status

Action Item	Status	Comment
MGSSAITS-1722[7] SQA: PDS 14.0 DDR: The task should update the software Classification record	Open	
MGSSAITS-1792[8] - RFA: PDS Software task to identify and implement automated way to capture code coverage OPEN	Open	
MGSSAITS-1871[9] - RFA: Investigate a way to waive software metrics for PDS CLOSED	Open	Ready for closeout

7 https://jira.jpl.nasa.gov/browse/MGSSAITS-1722
8 https://jira.jpl.nasa.gov/browse/MGSSAITS-1792?src=confmacro
9 https://jira.jpl.nasa.gov/browse/MGSSAITS-1871?src=confmacro

13 Deviations

N/A

14 Liens

N/A