Plan Document

NASA Planetary Data System

PDS 2010 System

Build 2 Test Plan
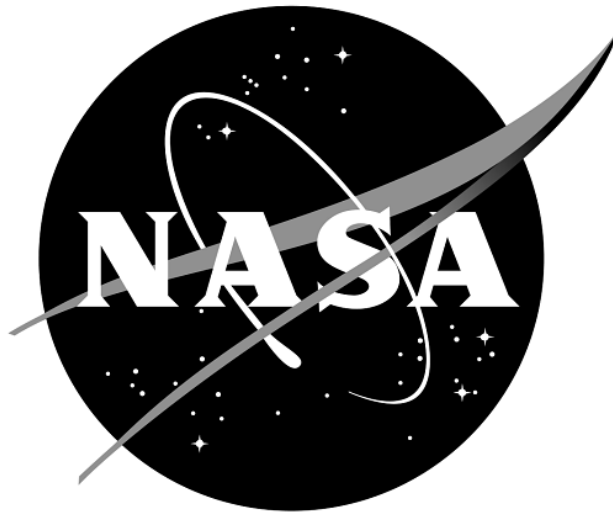
Change Log

Revision	Date	Description	Author
Draft		Initial draft release.	

Contents

1 Introduction

For over fifteen years, the Planetary Data System (PDS) has been NASA's official data system for archiving and distribution of data from planetary exploration missions. It has been a leader in defining data standards, working with missions and instrument teams, and developing data system technologies. The PDS has been instrumental in changing the scientific culture by working with the planetary science community to publicly release and peer review the data it captures. It has also been used as a model by other science data systems interested in establishing distributed scientific networks organized by independent discipline nodes at facilities that are doing leading-edge scientific research.

While PDS has been a leader in developing and exploiting new technologies and ideas, an increasing workload and substantial increases in the volume of delivered data are now threatening the system's ability to accomplish its primary missions of both archiving planetary science data and distributing it to working scientists. PDS identified these challenges in its Roadmap published in 2006. In addition to these challenges, the ten year Roadmap outlined several goals including improving the PDS data standards, increasing user services by leveraging newer technologies and technical standards, and re-architecting PDS to ensure efficient operations of the system while supporting the increasing demands on PDS by both the data providers and end users.

In response to these challenges and goals, PDS has developed a plan for the next generation called "PDS 2010". The vision for PDS 2010, as defined by the PDS Management Council at its April 2008 meeting, includes:

- Simplified, but rigorous, archiving standards that are consistent, easy to learn, and easy to use
- Adaptable tools for designing archives, preparing data, and delivering the results efficiently to PDS
- On-line services allowing users to access and transform data quickly from anywhere in the system
- A highly reliable, scalable computing infrastructure that protects the integrity of data, links the nodes into an integrated data system, and provides the best service to both data providers and users

1.1 Purpose

PDS 2010 Integration and Test Plan with procedures will be utilized by the PDS 2010 project. The System Integration Team will coordinate the testing while defining the scope and depth of testing

as confirmed by the Project Manager. The purpose of this Test Plan is to define the plan to be used to ensure that the PDS 2010 system is compliant with requirements, meets customer's needs and is free of major defects. This document describes the System level integration and test activities and contains system level tests that demonstrate compliance to requirements. It documents the test scenarios for verification and validation of the PDS 2010 system components in an integrated manner. These scenarios are traced to the PDS 2010 system design requirements that in turn are traced to high level of PDS requirements.

1.2 Scope

This software system test plan describes the overall plan for verification and validation of the PDS 2010 Build I system. This test plan document identifies the planned test cases for ensuring that specific PDS 2010 Build I component requirements are implemented and working correctly at the system level. The specific test procedures will be documented in the PDS 2010 System Build I Test Procedure and Report document designed to report specific test steps and results of the system level tests that demonstrate compliance with PDS 2010 system Build I deliverable requirements.

During Phase I, the following Prototype Software will be deployed at the EN:

- PDS Ingest subsystem (Harvest, Registry (Inventory, Document, Dictionary, Service), Report and Security components)
- Tools suite (Validate)
- Internal administrative portal

The following Prototype Software will be deployed at one or two Discipline Nodes:

- Registry and Harvest components

Detailed prototype release description document will be generated to facilitate and to detail the deployment activities.

Test resource will include EN developer to support unit testing, and Integration Team (which consists of EN and Node staff) to perform integration testing. Phase I Test Report will be generated upon completion.

1.3 Document Revision

Revisions of this document will be held in the PDS Engineering Node website through the use of its document history functionality. Previous versions of this document can be accessed through the use of that tool.

1.4 Applicable Documents

1.4.1 Controlling Documents

[1] Planetary Data System Strategic Roadmap 2006 - 2016, February 2006.

[2] Planetary Data System Level 1, 2 and 3 Requirements, March 2010.

1.4.2 Referenced Documents

[3] PDS 2010 Project Plan, February 2010.

[4] PDS 2010 Operations Concept, February 2010.

[4] System Architecture Specification, May 2010.

[5] General System Requirements, June 11, 2011.

[6] Component Software Requirements and Design, for the following:

- o Registry Service, June 11, 2011

- o Harvest Tool, June 12, 2011

- o Security Service, June 11, 2011

- o Report Service, June 12, 2011

- o Preparation Tools, June 15, 2011

2 Test Approach

The PDS 2010 build structure is organized such that the system can be tested and verified early on and to ensure that transition will be seamless. The builds will ensure there is a coordinated testing and deployment of functionality coupled with upgrades of the data standards.

Build I Integration testing is the execution and management of tests by the Operations Team to ensure that the release of the PDS 2010 Build I meets the intended functionality. The process of verification testing includes the selection of verification items, unit testing, integration testing and beta testing.

Any functionality that is added to the system is treated as a new verification item. However, code is not the only type of verification item. Verification items also include documentation and the test code associated. They are as follows:

- Software (operational and test code) in Configuration Management
- The documentation associated with the build

The objective of Unit testing is to isolate each part of the application and show that the individual components function correctly. It is the responsibility of the PDS 2010 developers to document the unit test procedures, perform unit testing, and to record the unit test results. Unit Tests will be:

1. Developed to exercise the interface and functionality of a single component.
2. Exercised by the developers at build time.
3. Allow developers to spot immediate detection of coding anomalies.
4. Can be included with the source code providing a good source of documentation and enabling on-site testing.

The objective of Integration Testing is to catch a class of errors that cannot be found by Unit Testing (i.e., errors which relate to the interaction / aggregation of different program components). Integration Testing assures that external and internal interfaces function as designed; the aggregates of components perform accurately together; and the system performance is satisfactory. Integration Testing starts after the successful completion of Unit Testing. Integration testing will be performed by the PDS 2010 Integration and Test team and will be limited to testing of system functionality using PDS 2010 test cases.

Where feasible, test suites will be automated and will consist of cross-platform tests against PDS 2010-supported platforms. Problems found are reported in the PDS issue tracker (JIRA) and are documented as part of the test report.

The objective of the Beta Testing Phase is to involve the end-user in an informal audit of the PDS 2010 system. Following successful completion of Integration Testing, a Beta version of the system along with user's documentation will be made available to customers and stakeholders for "local" testing.

3 Test Cases

The following table lists descriptions of test cases that have been identified as system tests that will comprise the suite of "PDS 2010 system tests". These tests will be run as necessary to re-test the system after any software changes.

Test Case ID	AATESTME.T1
Description	Query for a registered artifact
Requirements	L5.REG.14
Success Criteria	If artifact was previously registered, return a positive message. If not, negative.

Test Case ID	AATESTME.T2
Description	Create a PDS Product Label using a design tool that initiates from an existing or a blank schema, accepts schema specification from a URL or a filename, facilitates editing of the label via standard editing features, validates, exports the schema, and generates the file for the product.
Requirements	L5.PRP.DE.1, L5.PRP.DE.2, L5.PRP.DE.3, L5.PRP.DE.4, L5.PRP.DE.5, L5.PRP.DE.6, L5.PRP.DE.7
Success Criteria	Design tool produces a syntactically valid PDS Product Label.

Test Case ID	AATESTME.T3
Description	For Harvest, provide a command-line interface, accept a configuration file, determine candidates for registration, capture metadata, submit metadata to the Registry Service. Registry accepts the artifact, assigns a global unique ID to the product.
Requirements	L5.HVT.1, L5.HVT.2, L5.HVT.5, L5.HVT.6, L5.HVT.7, L5.REG.1, L5.REG.4, L5.REG.6, L5.REG.8, L5.SEC.1
Success Criteria	Harvest tool, executed from the command line, discovers all matching artifacts and for each submits metadata, based on both identifying and artifact-specific metadata, to the Registry service. A matching artifact matches the criteria given in the user-edited configuration file. Tools to view the registry should show the matching artifacts, with appropriate metadata, including the guid, which is assigned by the Registry.

Test Case ID	AATESTME.T4
Description	Authorize only authenticated users access to a controlled capacity
Requirements	L5.SEC.1, L5.SEC.3
Success Criteria	Harvest fails to run when given invalid credentials.

Test Case ID	AATESTME.T5

Description	Update and delete registered artifacts.
Requirements	L5.REG.9, L5.REG.13
Success Criteria	Tools to view the registry should show the status of the artifacts operated upon.

Test Case ID	AATESTME.T6
Description	Harvest skips candidate products not matching configuration file
Requirements	L5.HVT.1, L5.HVT.5
Success Criteria	Tools to view the registry should show only matching products and not the others.

Test Case ID	AATESTME.T7
Description	Registry relates artifacts via (LID-based) association.
Requirements	L5.REG.2
Success Criteria	Tools to view the registry show the association.

Test Case ID	AATESTME.T8
Description	Harvest checks for previous registration.
Requirements	L5.HVT.8
Success Criteria	Harvest indicates attempt to re-harvest an artifact.

Test Case ID	AATESTME.T9
Description	Query and delete associations (not just products)). When Harvest registers a product, it also registers associations to the XML label file and to the referenced data file. These associations (non-LID-based) can be deleted.
Requirements	L5.REG.13, L5.REG.14
Success Criteria	

Test Case ID	GEN.T1
Description	Run components distributed over multiple machines on any PDS-supported platforms.
Requirements	L5.GEN.1, L5.GEN.2
Success Criteria	Services produce identical results independent of machine and platform.

Test Case ID	GEN.T2
Description	Services provide an application programming interface.
Requirements	L5.GEN.3
Success Criteria	For the functionality available via API, services produce results identical to non-API operation or as defined by documentation.

Test Case ID	GEN.T3
Description	Run tools via an application programming interface.
Requirements	L5.GEN.4
Success Criteria	For the functionality available via API, tools produce results identical to non-API operation or as defined by documentation.

Test Case ID	GEN.T4
Description	Services provide an interface to enable monitoring of health.
Requirements	L5.GEN.8
Success Criteria	Examine documentation for services.

Test Case ID	GEN.T5
Description	Applications meet Section 508 compliance guidelines.
Requirements	L5.GEN.9
Success Criteria	Applicable web pages conform to the criteria of Section 508.

Test Case ID	GEN.T6
Description	Restrict access to operations that alter the content of the registry.
Requirements	L5.GEN.10
Success Criteria	Registry service allows any user to view metadata. Only users with sufficient privilege can add or alter content in the registry.

Test Case ID	GEN.T7
Description	Document components' capabilities, dependencies, interfaces, installation, operation
Requirements	L5.GEN.11
Success Criteria	Examine such documentation.

Test Case ID	HVT.T1
Description	Provide a command-line interface, accept a configuration file, recursively traverse directories, determine candidates for registration, capture metadata, submit metadata to the Registry Service, track each artifact registration.
Requirements	L5.HVT.1, L5.HVT.2, L5.HVT.4, L5.HVT.5, L5.HVT.6, L5.HVT.7, L5.HVT.8, L5.GEN.7
Success Criteria	Harvest tool, executed from the command line, discovers all matching artifacts and for each submits metadata, based on both identifying and artifact-specific metadata, to the Registry service. A matching artifact resides in the directory tree of the target directory or is listed in a manifest file in the target directory, and it matches the criteria given in the user-edited configuration file and if previously registered, has been since modified. Tools to view the registry should show the matching artifacts, with appropriate metadata, and not show the non-matching artifacts.

Test Case ID	HVT.T2
Description	Execute from a scheduler, accept a configuration file, recursively traverse directories, determine candidates for registration, capture metadata, submit metadata to the Registry Service.
Requirements	L5.HVT.1, L5.HVT.3, L5.HVT.4, L5.HVT.5, L5.HVT.6, L5.HVT.7, L5.HVT.8
Success Criteria	Harvest tool, executed from a scheduler, discovers all matching artifacts and for each submits metadata, based on both identifying and artifact-specific metadata, to the Registry service. A matching artifact resides in the directory tree of the target directory or is listed in a manifest file in the target directory, and it matches the criteria given in the user-edited configuration file and if previously registered, has been since modified. Tools to view the registry should show the matching artifacts, with appropriate metadata, and not show the non-matching artifacts.

Test Case ID	HVT.T3
Description	Harvest a large number of files.
Requirements	L5.HVT.1, L5.HVT.3, L5.HVT.4, L5.HVT.5, L5.HVT.6, L5.HVT.7, L5.HVT.8
Success Criteria	Same as HVT.T1, but verifying that the mass deletion of registrations works

Test Case ID	PRV.T1
Description	Accept a file or a directory name for product(s) to be validated. If directory, be able to traverse the tree to find products. Indicate the schemas utilized during validation
Requirements	L5.PRP.VA.1, L5.PRP.VA.2, L5.PRP.VA.5, L5.PRP.VA.6, L5.PRP.VA.9, L5.GEN.7
Success Criteria	Validation tool validates a file or all eligible products in a directory tree. When validating a product, a label, or a schema, indicates which schemas it utilized during the validation. Ensures that a product label is well-formed XML and conforms to its schemas.

Test Case ID	PRV.T2

Description	Verify that a referenced file exists.
Requirements	L5.PRP.VA.10
Success Criteria	Validation tool verifies whether a schema is well-formed and conformant to its own schema.

Test Case ID	PRV.T3
Description	Validate aggregate products and all products referenced in the aggregation.
Requirements	L5.PRP.VA.3
Success Criteria	Validation tool traverses an aggregation and validates it and all individual products referenced by it.

Test Case ID	PRV.T4
Description	Merge label fragments
Requirements	L5.PRP.VA.4
Success Criteria	After merging, resulting label validates as if the fragments were physically merged.

Test Case ID	PRV.T5
Description	Validate schemas.
Requirements	L5.PRP.VA.8
Success Criteria	Validation tool verifies whether a schema is well-formed and conformant to its own schema.

Test Case ID	PRV.T6
Description	Accept schema file specified by file or directory
Requirements	L5.PRP.VA.7
Success Criteria	Label file validates against the schema specified

Test Case ID	PRV.T7
Description	Accept schema file specified by file or directory
Requirements	L5.PRP.VA.7
Success Criteria	Label file validates against the schema specified

Test Case ID	REG.T1

Description	Validate and accept metadata to register an artifact or modify an artifact's registration, query for a registered artifact, delete a registered artifact
Requirements	L5.REG.1, L5.REG.4, L5.REG.5, L5.REG.13, L5.REG.14, L5.GEN.7
Success Criteria	Registry service validates and accepts metadata for an artifact in a defined format, consistent with the appropriate schema for the artifact. Registering an Inventory artifact should allow locating and auditing the artifact. Registering a Dictionary artifact should be reflected in the Information Model. Registering a Document artifact, e.g. a schema, should store the file and make the document available. Registering a Service artifact should document and promote the service.

Test Case ID	REG.T2
Description	Relate artifact registrations.
Requirements	L5.REG.2
Success Criteria	Registry service relates together multiple artifacts during their registrations, whether as a batch or as individual registrations.

Test Case ID	REG.T3
Description	Maintain policies for classes of artifacts, i.e. all classes of artifacts capture a base set of metadata, in the form of XML attributes: objectType, guid as well as metadata specific to each artifact class.
Requirements	L5.REG.3
Success Criteria	Registry service defines separate policies for each class of artifact. Changes to the policies of a class can reflect in the validation of a registered artifact in that class.

Test Case ID	REG.T4
Description	Assign a global unique identifier to a registered artifact with no global unique identifier, query for the registered artifact, delete the registered artifact.
Requirements	L5.REG.6, L5.REG.13, L5.REG.14
Success Criteria	Registry service assigns each registered artifact, including multiple versions of an artifact, a global unique identifier.

Test Case ID	REG.T5
Description	Assign a version to a registered artifact based on its unique identifier.
Requirements	L5.REG.7
Success Criteria	Registry service assigns each registered artifact, especially multiple versions of an artifact, a version identifier, derivable from its logical identifier.

Test Case ID	REG.T6
Description	Allow replacement, approval, deprecation, undeprecation, and verification of registered artifacts.

Requirements	L5.REG.9, L5.REG.10, L5.REG.11, L5.REG.12
Success Criteria	Registry service provides these standard functions with expected results. Initial registration results in an artifact being in an unapproved state.

Test Case ID	REG.T7
Description	Enable replication of registry contents.
Requirements	L5.REG.15
Success Criteria	Contents of the registry are duplicated on a separate machine.

Test Case ID	REG.T8
Description	Verify registry contents.
Requirements	L5.REG.16
Success Criteria	Contents and checksums of the registry artifacts are examined.

Test Case ID	REG.T9
Description	Test scalability of registry.
Requirements	L5.REG.1
Success Criteria	Contents and checksums of the registry artifacts are examined.

Test Case ID	RPT.T1
Description	Periodically receive metrics in defined log files via a secure transfer protocol. Aggregate and store in a repository.
Requirements	L5.RPT.1, L5.RPT.2, L5.RPT.3, L5.RPT.4, L5.RPT.6, L5.GEN.5, L5.GEN.6
Success Criteria	Following operator configuration, Report Service gets its metrics periodically in log files generated by web and FTP servers, PDS2010 services, and node-specific services. Use tools to view the repository to compare against log. External applications and services provide the metrics.

Test Case ID	RPT.T2
Description	Discover product-related metrics. Aggregate and store in a repository.
Requirements	L5.RPT.5, L5.RPT.6
Success Criteria	Report Service queries Registry Service for metrics regarding products instead of transfers or views. Use tools to view the repository to compare against tools to view the registry.

Test Case ID	RPT.T3
Description	Control access to the repository and to the user interface.
Requirements	L5.RPT.7
Success Criteria	Authenticate for proper access, and report unsuccessful attempts.

Test Case ID	RPT.T4
Description	Tailor reports and report templates. Save report templates for reuse. Periodically generate reports from saved templates.
Requirements	L4.RPT.8, L5.RPT.9, L5.RPT.10
Success Criteria	Allow configuration of content, representation, filter, and scope of reports and report templates. Generated reports, even when generated from saved templates, should match configuration.

Test Case ID	RPT.T5
Description	Export report.
Requirements	L5.RPT.11
Success Criteria	Specify export format and see that report is generated in the specified format.

Test Case ID	SEC.T1
Description	Create, update, or delete a user identity and a group identity.
Requirements	L5.SEC.4, L5.SEC.6
Success Criteria	Security service provides these standard functions. Tools to view identities verify each activity.

Test Case ID	SEC.T2
Description	Add or remove a user from a group.
Requirements	L5.SEC.7
Success Criteria	Security service allows an operator of the system to add or remove a user from a group. The user should subsequently be able or unable to access capabilities specific to the group.

Test Case ID	SEC.T3
Description	Capture identifying information associated with a user identity.
Requirements	L5.SEC.5

Success Criteria	Security service captures identifying information through Test Case SEC.T1. Tools to view identities should show the information.

Test Case ID	SEC.T4
Description	Encrypt transmission of identifying credentials.
Requirements	L5.SEC.2
Success Criteria	Capture network packets generated during SEC.T4 to show encryption. OR trust that the protocol used encrypts.

4 Requirements Traceability

This following lists the requirement number, the ID of the planned test case that tests the requirement, and the system component that the requirement applies to. The first column of the table is just a count of the requirements.

For Test case specific procedures please refer to the test procedure and report document.

Count	System Component	Requirement #	Test case ID
1	General System	L5.GEN.1	GEN.T1
2	General System	L5.GEN.2	GEN.T1
3	General System	L5.GEN.3	GEN.T2
4	General System	L5.GEN.4	GEN.T3
5	General System	L5.GEN.5	RPT.T1
6	General System	L5.GEN.6	RPT.T1
7	General System	L5.GEN.7	HVT.T1, PRV.T1, REG.T1
8	General System	L5.GEN.8	GEN.T4
9	General System	L5.GEN.9	GEN.T5
10	General System	L5.GEN.10	GEN.T6
11	General System	L5.GEN.11	GEN.T7
12	Harvest Tool	L5.HVT.1	AATESTME.T3, AATESTME.T6, HVT.T1, HVT.T2
13	Harvest Tool	L5.HVT.2	AATESTME.T3, HVT.T1
14	Harvest Tool	L5.HVT.3	HVT.T2
15	Harvest Tool	L5.HVT.4	HVT.T1, HVT.T2
16	Harvest Tool	L5.HVT.5	AATESTME.T3, AATESTME.T6, HVT.T1, HVT.T2
17	Harvest Tool	L5.HVT.6	AATESTME.T3, HVT.T1, HVT.T2
18	Harvest Tool	L5.HVT.7	AATESTME.T3, HVT.T1, HVT.T2
19	Harvest Tool	L5.HVT.8	AATESTME.T8, HVT.T1, HVT.T2
20	Prep: Design Tool	L5.PRP.DE.1	AATESTME.T2
21	Prep: Design Tool	L5.PRP.DE.2	AATESTME.T2
22	Prep: Design Tool	L5.PRP.DE.3	AATESTME.T2
23	Prep: Design Tool	L5.PRP.DE.4	AATESTME.T2
24	Prep: Design Tool	L5.PRP.DE.5	AATESTME.T2
25	Prep: Design Tool	L5.PRP.DE.6	AATESTME.T2
26	Prep: Design Tool	L5.PRP.DE.7	AATESTME.T2
27	Prep: Validation Tool	L5.PRP.VA.1	PRV.T1
28	Prep: Validation Tool	L5.PRP.VA.2	PRV.T1
29	Prep: Validation Tool	L5.PRP.VA.3	PRV.T3
30	Prep: Validation Tool	L5.PRP.VA.4	PRV.T4
31	Prep: Validation Tool	L5.PRP.VA.5	PRV.T1
32	Prep: Validation Tool	L5.PRP.VA.6	PRV.T1
33	Prep: Validation Tool	L5.PRP.VA.7	PRV.T6, PRV.T7
34	Prep: Validation Tool	L5.PRP.VA.8	PRV.T5
35	Prep: Validation Tool	L5.PRP.VA.9	PRV.T1
36	Prep: Validation Tool	L5.PRP.VA.10	PRV.T2
37	Registry Service	L5.REG.1	AATESTME.T3, AATESTME.T9,REG.T1, REG.T9
38	Registry Service	L5.REG.2	AATESTME.T7, REG.T2
39	Registry Service	L5.REG.3	REG.T3

40	Registry Service	L5.REG.4	AATESTME.T3, REG.T1
41	Registry Service	L5.REG.5	REG.T1
42	Registry Service	L5.REG.6	AATESTME.T3, REG.T4
43	Registry Service	L5.REG.7	REG.T5
44	Registry Service	L5.REG.8	AATESTME.T3
45	Registry Service	L5.REG.9	AATESTME.T5, REG.T6
46	Registry Service	L5.REG.10	REG.T6
47	Registry Service	L5.REG.11	REG.T6
48	Registry Service	L5.REG.12	REG.T6
49	Registry Service	L5.REG.13	AATESTME.T5, AATESTME.T9, REG.T4
50	Registry Service	L5.REG.14	AATESTME.T1, AATESTME.T9, REG.T4
51	Registry Service	L5.REG.15	REG.T7
52	Registry Service	L5.REG.16	REG.T8
53	Report Service	L5.RPT.1	RPT.T1
54	Report Service	L5.RPT.2	RPT.T1
55	Report Service	L5.RPT.3	RPT.T1
56	Report Service	L5.RPT.4	RPT.T1
57	Report Service	L5.RPT.5	RPT.T2
58	Report Service	L5.RPT.6	RPT.T1, RPT.T2
59	Report Service	L5.RPT.7	RPT.T3
60	Report Service	L5.RPT.8	RPT.T4
61	Report Service	L5.RPT.9	RPT.T4
62	Report Service	L5.RPT.10	RPT.T4
63	Report Service	L5.RPT.11	RPT.T5
64	Search Service	L5.SCH.1	not ready yet
65	Search Service	L5.SCH.2	not ready yet
66	Search Service	L5.SCH.3	not ready yet
67	Search Service	L5.SCH.4	not ready yet
68	Search Service	L5.SCH.5	not ready yet
69	Search Service	L5.SCH.6	not ready yet
70	Search Service	L5.SCH.7	not ready yet
71	Search Service	L5.SCH.8	not ready yet
72	Search Service	L5.SCH.9	not ready yet
73	Search Service	L5.SCH.10	not ready yet
74	Search Service	L5.SCH.11	not ready yet
75	Search Service	L5.SCH.12	not ready yet
76	Search Service	L5.SCH.13	not ready yet
77	Security Service	L5.SEC.1	AATESTME.T3
78	Security Service	L5.SEC.2	SEC.T4
79	Security Service	L5.SEC.3	AATESTME.T4
80	Security Service	L5.SEC.4	SEC.T1
81	Security Service	L5.SEC.5	SEC.T3
82	Security Service	L5.SEC.6	SEC.T1
83	Security Service	L5.SEC.7	SEC.T2

5 Configuration Management and Issue Tracking

Build I release will be uniquely identified and under configuration management. PDS Configuration Management (CM) process will be utilized. It will be followed and maintained by the Operations Team who will act as the configuration management process engineer.

The established PDS 2010 JIRA system will be used to capture discrepancies found during testing. The system is located at:

http://oodt.jpl.nasa.gov/jira/

6 Test Environment

Build I integration and test environment encompasses the following:

Hostname	OS	Memory	Application
pdsdev1	Red Hat 5	12G RAM	Registry, Report
pdsdev2	Red Hat 5	12G RAM	Harvest, Security

Appendix A: Acronyms

CM – Configuration Management
DN – PDS Discipline or Data Node
GUI – Graphical User Interface
EN – PDS Engineering Node
I&T – Integration and Test
NASA – National Aeronautics and Space Administration
OS – Operating System
PDS – Planetary Data System
PDS3 – Version 3.8 of the PDS Data Standards
PDS4 – Version 4.0 of the PDS Data Standards
PDS 2010 – PDS 2010 Project
PDS MC – PDS Management Council
SDD – Software Design Document
SRD – Software Requirements Document