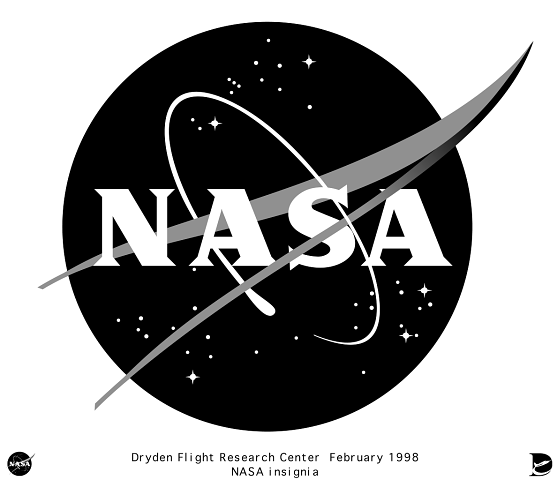
Plan Document

NASA Planetary Data System

PDS 2010 System

Build I Test Procedures & Report



## Change Log

|  |  |  |  |
| --- | --- | --- | --- |
| **Revision** | **Date** | **Description** | **Author** |
| Draft |  | Initial draft release. |  |
|  |  |  |  |

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## Introduction

### Purpose and Scope

This software system test documents specific test procedures and reports test steps and results of the system level tests that demonstrate the PDS 2010 system deployed for Build I. It verifies that PDS 2010 system Build I is compliant with Build I requirements, and ensures that the beta system functions are without critical defects. Test Traceability Matrix can be found in the PDS 2010 Build I Test Plan Section 4.

For PDS 2010 Build I, the following Prototype Software will be deployed at the EN:

* PDS Ingest subsystem (Harvest, Registry, Inventory, Document, Dictionary services), Report and Security services
* Tools suite (Label design and validation, Label and Schema generation)
* Internal administrative portal

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

* Registry, Harvest services, and Report client

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.

### 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.

### Applicable Documents

#### Controlling Documents

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

[2] Planetary Data System Level 1, 2 and 3 Requirements, August 2006.

#### Referenced Documents

[3] PDS 2010 Project Plan, March 2010.

[4] PDS 2010 Operations Concept, March 2010.

[4] System Architecture Specification, May 2010.

[5] Service Requirements, March 2010.

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

* + Registry Service (Inventory, Dictionary, Document, and Service), September 2010
  + Harvest Tool, September 2010
  + Security Service, September 2010
  + Report Service, September 2010
  + Preparation Tools, TBD

[7] PDS 2010 Build I Test Plan, June 2010.

## Executive Summary

### Assessment

The tools and services tested here work well with version V0.1.1.1.c of the PDS4 Information Model and may work well with a few subsequent versions. However, changes in the information model broke tests that worked previously, and that is very likely happen again.

### Major Findings

All tested tools and services worked as described in the Service Software Requirements and Design documents above.

### Success

Tools and services performed as documented.

### Metrics

This section provides a summary of the test metrics

|  |  |  |  |
| --- | --- | --- | --- |
| **# of tests performed** | **# of tests passed** | **# of tests failed** | **# of high priority anomalies** |
| 17 | 17 | 0 | 0 |

## Test Procedures

The following table captures test procedures and test results for the test cases that have been identified as tests that will comprise the suite of “PDS 2010 Build I system tests” in the PDS 2010 Build I Test Plan Section 3. These tests will be run as necessary to re-test the system after any software changes.

The test procedures assume the following software are installed:

- an XML-friendly web **browser**, e.g. firefox, to view the contents of a registry

- **curl**, a command-line utility to access a URL, used here to manipulate a registry

- an **XML editor**, e.g. eclipse. Though not recommended, this can be skipped.

- **Harvest**, http://pds-engineering.jpl.nasa.gov/pds2010/development/1.0.0/harvest/index.html

- **Validate**, http://pds-engineering.jpl.nasa.gov/pds2010/development/1.0.0/preparation/validate/index.html

The tests are written for Unix, though running on Windows needs only simple substitutions, e.g. directory names. Also, the steps involving a browser or curl, which is generally available on Unix machines, can be run from any machine without any of the test input files.

The tests assume pdsops2.jpl.nasa.gov hosts the registry, for which the tester has read/write access.

Before starting, extract the test input files. In Unix:

mkdir *testDir*

cd *testDir*

unzip build1aTestFiles.zip

|  |  |
| --- | --- |
| Test Case ID | AATESTME.T1 |
| Description | Query for a registered artifact |
| Test Steps | In browser:  http://pdsops2.jpl.nasa.gov/registry-service/registry/products/URN:NASA:PDS:testing.ImageGrayscale.MPFL-M-IMP-2-EDR |
| Test Results | Browser shows ugly messaged headed by "HTTP Status 500”  If browser shows a positive message, delete the product from the registry via AATESTME.T5 and re-run this test. |
| Comments |  |
| Date of Testing | 2011.01.27, 2011.01.31 |
| Test Personnel | John Ho, Richard Chen |

|  |  |
| --- | --- |
| 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. |
| Test Steps | Off-the-shelf XML editors, both free (e.g. eclipse) and commercial (oxygen), provide the functionality required. Verification of installation suffices. Thus,  cd *testdir*  mkdir holdings  cp testAAtestme/minimalImage.xml holdings/minimalImage.xml  If manual verification of the XML editor’s sufficiency as the design tool is desired, use the editor to create, validate , and export file holdings/minimalImage.xml (instead of copying above). Tutorials for all editors are widely available. The file’s contents:  <?xml version="1.0" encoding="UTF-8"?>  <Product\_Image\_Grayscale xmlns="http://pds.nasa.gov/schema/pds4/pds"  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  xsi:schemaLocation="http://pds.nasa.gov/schema/pds4/pds http://pds.jpl.nasa.gov/repository/pds4/examples/dph\_examples/schemas/Product\_Image\_Grayscale\_edited\_0111c.xsd">  <Identification\_Area\_Product>  <logical\_identifier>URN:NASA:PDS:testing.ImageGrayscale.MPFL-M-IMP-2-EDR</logical\_identifier>  <version\_id>v1.0</version\_id>  <product\_class>Product\_Image\_Grayscale</product\_class>  <title>MARS PATHFINDER LANDER Experiment</title>  <Subject\_Area>  <target\_name>MARS</target\_name>  <instrument\_name>IMAGER FOR MARS PATHFINDER</instrument\_name>  <instrument\_host\_name>MARS PATHFINDER LANDER</instrument\_host\_name>  </Subject\_Area>  </Identification\_Area\_Product>  <Cross\_Reference\_Area\_Product>  <Observing\_System>  <title>Observing System for MPFL</title>  <Observing\_System\_Component>  <observing\_system\_component\_type>SENSOR</observing\_system\_component\_type>  <Observing\_System\_Reference\_Entry>  <!--lidvid\_reference>URN:NASA:PDS:testing.instrument.IMP.MPFL::v1.0</lidvid\_reference-->  <reference\_association\_type>has\_instrument</reference\_association\_type>  </Observing\_System\_Reference\_Entry>  </Observing\_System\_Component>  </Observing\_System>  </Cross\_Reference\_Area\_Product>  <Observation\_Area>  <start\_date\_time>unknown</start\_date\_time>  <stop\_date\_time>unknown</stop\_date\_time>  </Observation\_Area>  <File\_Area>  <File>  <local\_identifier>MPFL\_M\_IMP\_IMAGE\_FILE\_ID</local\_identifier>  <file\_name>i943630r.raw</file\_name>  </File>  </File\_Area>  <Data\_Area\_Image\_Grayscale>  <Image\_Grayscale base\_class="Array\_Base">  <local\_identifier>MPFL-M-IMP\_IMG\_GRAYSCALE</local\_identifier>  <axes>2</axes>  <axis\_order>FIRST\_INDEX\_FASTEST</axis\_order>  <encoding\_type>binary</encoding\_type>  <Data\_Location>  <file\_local\_identifier>MPFL\_M\_IMP\_IMAGE\_FILE\_ID</file\_local\_identifier>  <offset>0</offset>  </Data\_Location>  <Array\_Axis>  <elements>248</elements>  <name>LINE</name>  <sequence\_number>1</sequence\_number>  </Array\_Axis>  <Array\_Axis>  <elements>256</elements>  <name>SAMPLE</name>  <sequence\_number>2</sequence\_number>  </Array\_Axis>  <Array\_Element>  <data\_type>UnSignedMSB2</data\_type>  </Array\_Element>  </Image\_Grayscale>  </Data\_Area\_Image\_Grayscale>  </Product\_Image\_Grayscale> |
| Test Results | File minimalImage.xml sits in directory holdings/. |
| Comments |  |
| Date of Testing | 2011.01.27, 2011.01.31 |
| Test Personnel | John Ho, Richard Chen |

|  |  |
| --- | --- |
| 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. |
| Test Steps | 1. cp testAAtestme/harvestPolicy.xml . 2. Edit ./harvestPolicy.xml to modify <path> to *testDir*/holdings 3. Harvest -u*username* –p*password* harvestPolicy.xml 4. Repeat browser query in AATESTME.T1 |
| Test Results | Step 3 returns the following:  PDS Harvest Tool Log  Version Version 0.2.0  Time Wed, Nov 17 2010 at 09:59:22 PM  Registry Location http://pdsops2.jpl.nasa.gov/registry-service  INFO: [*testDir*/holdings/minimalImage.xml] Begin processing.  SUCCESS: [*testDir*/holdings/minimalImage.xml] Succesfully registered product: URN:NASA:PDS:testing.ImageGrayscale.MPFL-M-IMP-2-EDR::v1.0  INFO: [*testDir*/holdings/minimalImage.xml] Product has the following guid: urn:uuid:05b5a149-1062-48c4-94ae-0abb7717b5be  Summary:  1 of 1 files are candidate products, 0 skipped  1 of 1 candidate products registered.  0 of 0 associations registered.  End of Log  This says Harvest registered product holdings/minimalImage.xml (because it has a <product\_class> that matches harvestPolicy.xml’s objectType).  Step 4 shows the registration of minimalImage.xml. Registry requires three items of metadata (lid, versionId, name), which appear as attributes to the product. The three correspond to the items that harvestPolicy.xml requests to be saved via xPath (logical\_identifier, version\_id, and title). Browser also shows the guid, which is assigned by Registry, not Harvest. |
| Comments | An ugly warning (a stack of java exceptions) could not be replicated but did not affect the correct functioning of Harvest. |
| Date of Testing | 2011.01.27, 2011.01.31 |
| Test Personnel | John Ho, Richard Chen |

|  |  |
| --- | --- |
| Test Case ID | AATESTME.T4 |
| Description | Authorize only authenticated users access to a controlled capacity |
| Test Steps | Harvest -u*username* –p*anyBadPassword* harvestPolicy.xml |
| Test Results | Security service token ID request failure. HTTP Status Code received: 401 PDS Harvest Tool Log  Version Version 0.2.0  Time Sat, Nov 20 2010 at 04:07:14 PM  Registry Location http://pdsops2.jpl.nasa.gov/registry-service  Summary:  0 of 0 files are candidate products, 0 skipped  0 of 0 candidate products registered.  0 of 0 associations registered.  End of Log |
| Comments |  |
| Date of Testing | 2011.01.27, 2011.01.31 |
| Test Personnel | John Ho, Richard Chen |

|  |  |
| --- | --- |
| Test Case ID | AATESTME.T5 |
| Description | Update and delete registered artifacts. |
| Test Steps | 1. Edit holdings/minimalImage.xml to change version\_id to v2.0 2. Harvest: repeat step in AATESTME.T3 3. Verification: repeat browser query in AATESTME.T1 4. Append “/all” to browser query 5. curl --verbose -X DELETE http://pdsops2.jpl.nasa.gov/registry-service/registry/products/URN:NASA:PDS:testing.ImageGrayscale.MPFL-M-IMP-2-EDR/v1.0 6. Repeat step 4 7. curl --verbose -X DELETE http://pdsops2.jpl.nasa.gov/registry-service/registry/products/URN:NASA:PDS:testing.ImageGrayscale.MPFL-M-IMP-2-EDR/**v2.0** 8. Repeat step 3 (or step 4, which would show no results) |
| Test Results | Step 2 has similar output to the similar step in AATESTME.T3.  Step 3 has similar output to previous step but with “v2.0” instead of “v1.0”  Step 4 shows the registrations of both versions  Step 5 has output including “HTTP/1.1 200 OK“. The real verification is step 6  Step 6 shows registration of only v2.0  Step 7 has similar output to step 5  Step 8 returns the error message expected in AATESTME.T1, “HTTP Status 500” |
| Comments |  |
| Date of Testing | 2011.01.27, 2011.01.31 |
| Test Personnel | John Ho, Richard Chen |

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| --- | --- |
| Test Case ID | AATESTME.T6 |
| Description | Harvest skips candidate products not matching configuration file |
| Test Steps | 1. cp testAAtestme/unharvested\* holdings/ 2. Harvest -u*username* -p*password* harvestPolicy.xml   In a browser, check the registration of the 2 unsuccessful and 1 successful products:   1. http://pdsops2.jpl.nasa.gov/registry-service/registry/products/URN:NASA:PDS:example.DPH.DocumentProduct.PHX-M-MECA-4-NIRDR 2. http://pdsops2.jpl.nasa.gov/registry-service/registry/products/URN:NASA:PDS:example.DPH.TableBin.PHX-M-TT-5-WIND-VEL-DIR 3. Repeat browser query in AATESTME.T1 |
| Test Results | Harvest in step 2 produces:  PDS Harvest Tool Log  Version Version 0.2.0  Time Wed, Nov 17 2010 at 10:32:09 PM  Registry Location http://pdsops2.jpl.nasa.gov/registry-service  INFO: [*testDir*/holdings/minimalImage.xml] Begin processing.  SUCCESS: [*testDir*/holdings/minimalImage.xml] Succesfully registered product: URN:NASA:PDS:testing.ImageGrayscale.MPFL-M-IMP-2-EDR::v1.0  INFO: [*testDir*/holdings/minimalImage.xml] Product has the following guid: urn:uuid:617b9dc2-59ff-40c0-ae07-29a77eaa4771  INFO: [*testDir*/holdings/unharvestedDoc.xml] Begin processing.  SKIP: [*testDir*/holdings/unharvestedDoc.xml] 'Product\_Document' is not an object type found in the policy file.  INFO: [*testDir*/holdings/unharvestedTable.xml] Begin processing.  SKIP: [*testDir*/holdings/unharvestedTable.xml] 'Product\_Table\_Binary' is not an object type found in the policy file.  Summary:  1 of 3 files are candidate products, 2 skipped  1 of 1 candidate products registered.  0 of 0 associations registered.  End of Log  Steps 3 and 4 return the error message expected in AATESTME.T1, “HTTP Status 500”  Step 5 has similar output to AATESTME.3 |
| Comments |  |
| Date of Testing | 2011.01.27, 2011.01.31 |
| Test Personnel | John Ho, Richard Chen |

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| --- | --- |
| Test Case ID | AATESTME.T7 |
| Description | Registry relates artifacts via association. |
| Test Steps | 1. Check that the association is not already registered: http://pdsops2.jpl.nasa.gov/registry-service/registry/associations?sourceLid=URN:NASA:PDS:testing.ImageGrayscale.MPFL-M-IMP-2-EDR 2. Clean up previous tests, if any (e.g. AATESTME.T6):   curl --verbose -X DELETE http://pdsops2.jpl.nasa.gov/registry-service/registry/products/URN:NASA:PDS:testing.ImageGrayscale.MPFL-M-IMP-2-EDR/v2.0  curl --verbose -X DELETE http://pdsops2.jpl.nasa.gov/registry-service/registry/products/URN:NASA:PDS:testing.instrument.IMP.MPFL/v1.0   1. Edit holdings/minimalImage.xml to uncomment <lidvid\_reference> in <Observing\_System\_Reference\_Entry> 2. cp testAAtestme/minimalInst.xml holdings/ 3. Harvest -u*username* -p*password* harvestPolicy.xml 4. In a browser http://pdsops2.jpl.nasa.gov/registry-service/registry/associations?sourceLid=URN:NASA:PDS:testing.ImageGrayscale.MPFL-M-IMP-2-EDR   checks that the product-to-instrument association was created   1. In a browser http://pdsops2.jpl.nasa.gov/registry-service/registry/associations?sourceLid=URN:NASA:PDS:testing.instrument.IMP.MPFL   checks that the instrument-to-host association was created, even though the host might not be registered yet |
| Test Results | Step 1: <response numFound="0">… If not, delete the association as in AATESTME.T9  Step 2: May have ugly messages, especially if not previously run.  Step 5: PDS Harvest Tool Log  Version Version 0.2.0  Time Thu, Nov 18 2010 at 12:13:18 AM  Registry Location http://pdsops2.jpl.nasa.gov/registry-service  Version Version 0.2.0  Time Mon, Jan 31 2011 at 09:53:38 PM  Registry Location http://pdsops2.jpl.nasa.gov/registry-service  INFO: [*testDir*/holdings/minimalImage.xml] Begin processing.  SUCCESS: [*testDir*/holdings/minimalImage.xml] Succesfully registered product: URN:NASA:PDS:testing.ImageGrayscale.MPFL-M-IMP-2-EDR::v2.0  INFO: [*testDir*/holdings/minimalImage.xml] Product has the following guid: urn:uuid:486eca21-d748-44b5-8bdc-e00aab897337  SUCCESS: [*testDir*/holdings/minimalImage.xml] Successfully registered association to URN:NASA:PDS:testing.instrument.IMP.MPFL::v1.0  INFO: [*testDir*/holdings/minimalInst.xml] Begin processing.  SUCCESS: [*testDir*/holdings/minimalInst.xml] Succesfully registered product: URN:NASA:PDS:testing.instrument.IMP.MPFL::v1.0  INFO: [*testDir*/holdings/minimalInst.xml] Product has the following guid: urn:uuid:badeb7b5-7074-46ec-a6e5-3db8e7b3d252  SUCCESS: [*testDir*/holdings/minimalInst.xml] Successfully registered association to URN:NASA:PDS:instrument\_host.MPFL::1.0  INFO: [*testDir*/holdings/unharvestedDoc.xml] Begin processing.  SKIP: [*testDir*/holdings/unharvestedDoc.xml] 'Product\_Document' is not an object type found in the policy file.  INFO: [*testDir*/holdings/unharvestedTable.xml] Begin processing.  SKIP: [*testDir*/holdings/unharvestedTable.xml] 'Product\_Table\_Binary' is not an object type found in the policy file.  Summary:  2 of 4 files are candidate products, 2 skipped  2 of 2 candidate products registered.  2 of 2 associations registered.  End of Log  Step 6:  <response numFound="1" start="1">  <results>  <association associationType="has\_instrument" targetHome="http://pdsops2.jpl.nasa.gov/registry-service" targetVersionId="v1.0" targetLid="URN:NASA:PDS:testing.instrument.IMP.MPFL" sourceHome="http://pdsops2.jpl.nasa.gov/registry-service" sourceVersionId="v2.0" sourceLid="URN:NASA:PDS:testing.ImageGrayscale.MPFL-M-IMP-2-EDR" versionId="1.0" versionName="1.0" status="Submitted" objectType="Association" lid="urn:uuid:b5d28a78-1a6e-4b07-bfca-2b0e9aca0468" home="http://pdsops2.jpl.nasa.gov/registry-service" guid="urn:uuid:d23a736d-e50f-4705-b6d9-4ba6a0d41df4"/>  </results>  </response>  Step 7 (note: if this test is repeated, the registry will have more than 1 result):  <response numFound="1" start="1">  <results>  <association associationType="has instrument\_host" targetHome="http://pdsops2.jpl.nasa.gov/registry-service" targetVersionId="1.0" targetLid="URN:NASA:PDS:instrument\_host.MPFL" sourceHome="http://pdsops2.jpl.nasa.gov/registry-service" sourceVersionId="v1.0" sourceLid="URN:NASA:PDS:testing.instrument.IMP.MPFL" versionId="1.0" versionName="1.0" status="Submitted" objectType="Association" lid="urn:uuid:f66d2777-cda8-43c5-b614-7ba2f466e245" home="http://pdsops2.jpl.nasa.gov/registry-service" guid="urn:uuid:38a0a0bc-5dc8-4959-b04d-e4a6f31763ea"/>  </results>  </response> |
| Comments | Variations of this test showed one minor anomaly and one feature:  - Create a Product\_Instrument with no associations. Harvest it. Modify the file to add an association to an instrument\_host. Harvest again. Because the product already exists, Harvest passes on it and does not register the association.  This is expected behavior. The product must change its version to add an association.  - Create a product. Harvest it. Delete the product from the registry but not its associations. Harvest again. The registry ends up with two identical (except for the guid) associations.  Minor anomaly: Harvest should check if the association already exists before attempting to register. This is an unlikely sequence of events.  To track this anomaly: <https://oodt.jpl.nasa.gov/jira/browse/PDS-1> |
| Date of Testing | 2011.01.27, 2011.01.31 |
| Test Personnel | John Ho, Richard Chen |

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| --- | --- |
| Test Case ID | AATESTME.T8 |
| Description | Harvest checks for previous registration. |
| Test Steps | Harvest -u*username* -p*password* harvestPolicy.xml |
| Test Results | PDS Harvest Tool Log  Version Version 0.2.0  Time Sat, Nov 20 2010 at 03:25:35 PM  Registry Location http://pdsops2.jpl.nasa.gov/registry-service  INFO: [*testDir* /holdings/minimalImage.xml] Begin processing.  WARNING: [*testDir* /holdings/minimalImage.xml] Product already exists in the registry: URN:NASA:PDS:testing.ImageGrayscale.MPFL-M-IMP-2-EDR::v2.0  INFO: [*testDir* /holdings/minimalInst.xml] Begin processing.  WARNING: [*testDir* /holdings/minimalInst.xml] Product already exists in the registry: URN:NASA:PDS:testing.instrument.IMP.MPFL::v1.0  INFO: [*testDir* /holdings/unharvestedDoc.xml] Begin processing.  SKIP: [*testDir* /holdings/unharvestedDoc.xml] 'Product\_Document' is not an object type found in the policy file.  INFO: [*testDir* /holdings/unharvestedTable.xml] Begin processing.  SKIP: [*testDir* /holdings/unharvestedTable.xml] 'Product\_Table\_Binary' is not an object type found in the policy file.  Summary:  2 of 4 files are candidate products, 2 skipped  0 of 2 candidate products registered.  0 of 0 associations registered.  End of Log |
| Comments |  |
| Date of Testing | 2011.01.27, 2011.01.31 |
| Test Personnel | John Ho, Richard Chen |

|  |  |
| --- | --- |
| Test Case ID | AATESTME.T9 |
| Description | Query and delete associations (not just products) |
| Test Steps | 1. In a browser, http://pdsops2.jpl.nasa.gov/registry-service/registry/associations?sourceLid=URN:NASA:PDS:testing.ImageGrayscale.MPFL-M-IMP-2-EDR 2. curl -X DELETE --verbose http://pdsops2.jpl.nasa.gov/registry-service/registry/associations/*guidFromPreviousStep* 3. http://pdsops2.jpl.nasa.gov/registry-service/registry/associations?sourceLid=URN:NASA:PDS:testing.ImageGrayscale.MPFL-M-IMP-2-EDR |
| Test Results | Step 1: similar to the output of either of the last two steps of AATESTME.T7  Step 2: benign output, with “HTTP/1.1 200 OK” somewhere in the middle.  Step 3: <response numFound="0">… |
| Comments |  |
| Date of Testing | 2011.01.27, 2011.01.31 |
| Test Personnel | John Ho, Richard Chen |

|  |  |
| --- | --- |
| Test Case ID | GEN.T1 |
| Description | Run components distributed over multiple machines on any PDS-supported platforms. |
| Test Steps | Ensure your machine is not the same machine as the Registry’s. Run all AATESTME.\* steps. |
| Test Results | Results should be as described in the AATESTME.\* Test Results. |
| Comments |  |
| Date of Testing | 2011.01.27, 2011.01.31 |
| Test Personnel | John Ho, Richard Chen |

|  |  |
| --- | --- |
| Test Case ID | GEN.T2 \*not ready for build 1 |
| Description | Services provide an application programming interface. |
| Test Steps |  |
| Test Results |  |
| Comments |  |
| Date of Testing |  |
| Test Personnel |  |

|  |  |
| --- | --- |
| Test Case ID | GEN.T3 \*not ready for build 1 |
| Description | Run tools via an application programming interface. |
| Test Steps |  |
| Test Results |  |
| Comments |  |
| Date of Testing |  |
| Test Personnel |  |

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| --- | --- |
| Test Case ID | GEN.T4 \*not ready for build 1 |
| Description | Services provide an interface to enable monitoring of health. |
| Test Steps |  |
| Test Results |  |
| Comments |  |
| Date of Testing |  |
| Test Personnel |  |

|  |  |
| --- | --- |
| Test Case ID | GEN.T5 \*not ready for build 1 |
| Description | Applications meet Section 508 compliance guidelines. |
| Test Steps |  |
| Test Results |  |
| Comments |  |
| Date of Testing |  |
| Test Personnel |  |

|  |  |
| --- | --- |
| Test Case ID | GEN.T6 |
| Description | Restrict access to operations that alter the content of the registry. |
| Test Steps | AATESTME.T4 tests this for the Registry (and Harvest) service. Other mechanisms may exist for altering the registry. |
| Test Results |  |
| Comments |  |
| Date of Testing | 2011.01.27, 2011.01.31 |
| Test Personnel | John Ho, Richard Chen |

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| --- | --- |
| Test Case ID | GEN.T7 |
| Description | Document components’ capabilities, dependencies, interfaces, installation, operation |
| Test Steps | Examine such documentation. |
| Test Results |  |
| Comments |  |
| Date of Testing |  |
| Test Personnel |  |

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| --- | --- |
| 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. |
| Test Steps | Note: Step 3 may take hours to run.   1. In testHarvest/harvestBundle.xml,  * change <bundles><file> to *testDir*/testHarvest/ Product\_Bundle\_context\_20101108.xml * change <collections><file> to *testDir*/testHarvest/… * change <directories><path> to *testDir*  1. testHarvest/preClean 2. Harvest testHarvest/harvestBundle.xml -u*username* -p*password* 3. Harvest testHarvest/harvestBundle.xml -u*username* -p*password* |
| Test Results | harvestCheck matches logical\_identifier in files with lid in the registry  Step 2: could have many error messages. preClean ensures somewhat clean registry  Step 3: Harvest should register 5728 files, 32723 associations  Step 4: No additional registrations should occur |
| Comments |  |
| Date of Testing | 2011.01.27, 2011.01.31 |
| Test Personnel | John Ho, Richard Chen |

|  |  |
| --- | --- |
| Test Case ID | HVT.T2 \*not ready for build 1 |
| Description | Execute from a scheduler, accept a configuration file, recursively traverse directories, determine candidates for registration, capture metadata, submit metadata to the Registry Service. |
| Test Steps |  |
| Test Results |  |
| Comments |  |
| Date of Testing |  |
| Test Personnel |  |

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| --- | --- |
| 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. |
| Test Steps | 1. cd *testDir*; mkdir vtest; cp testAAtestme/\* vtest/ 2. Validate vtest 3. mv vtest/harvestPolicy.xml . 4. Validate vtest 5. mkdir vtest/bad; mv ./harvestPolicy.xml vtest/bad/ 6. Validate vtest 7. Validate vtest/minimalInst.xml |
| Test Results | Step 2: ERROR [*testDir*/vtest /harvestPolicy.xml] line -1, -1: Could not find product class for label.  Step 4: no errors since the bad label (harvestPolicy.xml is not a PDS4 product) is gone  Step 6: ERROR [*testDir*/vtest/bad/harvestPolicy.xml]… since Validate traverses  Step 7: no errors, as test AATESTME.T2 might have shown  Every run of Validate traces the schemas used. |
| Comments |  |
| Date of Testing | 2011.01.27, 2011.01.31 |
| Test Personnel | John Ho, Richard Chen |

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| --- | --- |
| Test Case ID | PRV.T2 \*not ready for build 1 |
| Description | Verify that a referenced file exists. |
| Test Steps | 1. Validate vtest/minimalImage.xml 2. echo fakeTokenOfData > vtest/i943630r.raw 3. Validate vtest/minimalImage.xml |
| Test Results | Step 1: ERROR [*testDir*/vtest/harvestPolicy.xml]  Step 3: no errors |
| Comments |  |
| Date of Testing |  |
| Test Personnel |  |

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| --- | --- |
| Test Case ID | PRV.T3 \*not ready for build 1 |
| Description | Validate aggregate products and all products referenced in the aggregation. |
| Test Steps |  |
| Test Results |  |
| Comments |  |
| Date of Testing |  |
| Test Personnel |  |

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| --- | --- |
| Test Case ID | PRV.T4 \*not ready for build 1 |
| Description | Merge label fragments |
| Test Steps |  |
| Test Results |  |
| Comments |  |
| Date of Testing |  |
| Test Personnel |  |

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| --- | --- |
| Test Case ID | PRV.T5 \*not ready for build 1 |
| Description | Validate schema |
| Test Steps |  |
| Test Results |  |
| Comments |  |
| Date of Testing |  |
| Test Personnel |  |

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| --- | --- |
| Test Case ID | PRV.T6 |
| Description | Accept schema file specified by file or directory |
| Test Steps | 1. Validate testValidate/im2.xml 2. Validate -x testValidate/PIG2.xsd img.xml |
| Test Results | im2.xml is the same file as testAAtestme/minimalImage.xml except “Product\_Image\_Grayscale” has been replaced with “PIG”. testValidate/PIG2.xsd defines the schema for PIG, which is the same as Product\_Image\_Grayscale’s.  Step 1: ERROR [file:/PDS/PDS4test/testValidate/im2.xml] line 4, 68: cvc-elt.1.a: Cannot find the declaration of element 'PIG'.  Step 2: no error |
| Comments |  |
| Date of Testing | 2011.01.27, 2011.01.31 |
| Test Personnel | John Ho, Richard Chen |

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| --- | --- |
| Test Case ID | REG.T1 |
| Description | Validate and accept metadata to register an artifact or modify an artifact’s registration. |
| Test Steps | 1. cd *testDir* 2. http://pdsops2.jpl.nasa.gov/registry-service/registry/products/testing.REG.T1   in a browser shows no current product has lid “testing.REG.t1”, which input files test.REG.T1[abc].xml have.   1. curl -X POST -H "Content-type:application/xml" -v -d @testRegistry/test.REG.T1a.xml http://pdsops2.jpl.nasa.gov/registry-service/registry/products   attempts to register the bad input file   1. Repeat step 1 to ensure lid still does not exist. 2. curl -X POST -H "Content-type:application/xml" -v -d @testRegistry/test.REG.T1b.xml http://pdsops2.jpl.nasa.gov/registry-service/registry/products   registers a good input file   1. Repeat step 1 to see the lid 2. curl -X DELETE --verbose http://pdsops2.jpl.nasa.gov/registry-service/registry/products/testing.REG.T1/1.0 3. Repeat step 1 to ensure lid no longer exists 4. curl -X POST -H "Content-type:application/xml" -v -d @testRegistry/test.REG.T1c.xml http://pdsops2.jpl.nasa.gov/registry-service/registry/products   registers a good input file with different values for the phone numbers   1. Repeat step 1 to see the changed values |
| Test Results | Step 2: The error message should be “HTTP Status 500 –“. If lid does exist, run step 6  Step 3: The error message should be “HTTP/1.1 400 Bad Request “  Step 4: The error message should be “HTTP Status 500 –“  Step 5: Benign output messages without “ERROR”  Step 6: Upon success, the registry service returns good xml (instead of an error message), which firefox displays nicely  Step 8: The error message should be “HTTP Status 500 –“  Step 9: Upon success, the registry service returns good xml with different values for the phone numbers, i.e. from (818)777-7777 and (818)888-8888 to (818)222-2222 and (818)333-3333 |
| Comments |  |
| Date of Testing | 2011.01.27, 2011.01.31 |
| Test Personnel | John Ho, Richard Chen |

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| --- | --- |
| Test Case ID | REG.T2 |
| Description | Relate artifact registrations |
| Test Steps | 1. http://pdsops2.jpl.nasa.gov/registry-service/registry/associations?targetLid=testing.REG.T1   shows no current associations for targetLid=testing.REG.T1   1. curl -X POST -H "Content-type:application/xml" -v -d @testRegistry/test.REG.T2z.xml http://pdsops2.jpl.nasa.gov/registry-service/registry/associations   adds 1 association (from a nonexistent sourceLid) to desired targetLid   1. curl -X POST -H "Content-type:application/xml" -v -d @testRegistry/test.REG.T2y.xml http://pdsops2.jpl.nasa.gov/registry-service/registry/associations   adds another association to desired targetLid   1. Repeat step 1 to see the two associations   (POSTing the sourceLids referenced in steps 2 and 3 is actually unnecessary) |
| Test Results | Step 1: registry service returns xml with 0 responses. If >0 responses, for each response, get the value of **guid=** and append it to:  curl -X DELETE --verbose http://pdsops2.jpl.nasa.gov/registry-service/registry/associations/*guidFromPreviousStep*  Steps 2,3: Benign output messages without “ERROR”  Step 4: Upon success, the registry service returns good xml with 2 <association> tags |
| Comments |  |
| Date of Testing | 2011.01.27, 2011.01.31 |
| Test Personnel | John Ho, Richard Chen |

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| --- | --- |
| Test Case ID | REG.T3 \*not ready for build 1 |
| Description | Maintain policies for classes of artifacts. |
| Test Steps |  |
| Test Results |  |
| Comments |  |
| Date of Testing |  |
| Test Personnel |  |

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| --- | --- |
| Test Case ID | REG.T4 |
| Description | Assign a global unique identifier to a registered artifact |
| Test Steps | 1. http://pdsops2.jpl.nasa.gov/registry-service/registry/products/testing.REG.T2a   shows no current product with targetLid=testing.REG.T2a   1. curl -X POST -H "Content-type:application/xml" -v -d @testRegistry/test.REG.T4.xml http://pdsops2.jpl.nasa.gov/registry-service/registry/products 2. Repeat step 1 |
| Test Results | Step 1: The error message should be “HTTP Status 500 –“. If not,  curl -X DELETE --verbose http://pdsops2.jpl.nasa.gov/registry-service/registry/products/testing.REG.T2a/1.0  Step 2: Benign output messages without “ERROR”  Step 3: Upon success, the registry service returns xml with an automatically assigned guid for lid=testing.REG.T2a |
| Comments |  |
| Date of Testing | 2011.01.27, 2011.01.31 |
| Test Personnel | John Ho, Richard Chen |

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| --- | --- |
| Test Case ID | REG.T5 \*superseded |
| Description | Assign a version to a registered artifact based on its unique identifier |
| Test Steps | 1. http://pdsops2.jpl.nasa.gov/registry-service/registry/products/testing.REG.T2b   shows no current product targetLid=testing.REG.T2b   1. curl -X POST -H "Content-type:application/xml" -v -d @testRegistry/test.REG.T5a.xml http://pdsops2.jpl.nasa.gov/registry-service/registry/products 2. Repeat step 1. Note that userVersion is 1.0 3. curl -X POST -H "Content-type:application/xml" -v -d @testRegistry/test.REG.T5b.xml http://pdsops2.jpl.nasa.gov/registry-service/registry/products 4. Repeat step 1. Note that userVersion is 2.0 5. http://pdsops2.jpl.nasa.gov/registry-service/registry/products/testing.REG.T2b/all   shows both versions |
| Test Results | Step 1: The error message should be “HTTP Status 500 –“  Step 2: Benign output messages without “ERROR”  Step 3: Upon success, the registry service returns good xml with userVersion = 1.0  Step 5: Upon success, the registry service returns good xml with userVersion = 2.0  Step 6: Upon success, the registry service returns good xml showing both posts. |
| Comments |  |
| Date of Testing |  |
| Test Personnel |  |

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| --- | --- |
| Test Case ID | REG.T6 \*not ready for build 1 |
| Description | Allow replacement, approval, deprecation, undeprecation, and verification of registered artifacts. |
| Test Steps | Eventually: curl -X POST -H "Content-type:application/xml" -v http://pdsops2.jpl.nasa.gov/registry-service/registry/products/testing.REG.T1/1.0/deprecate |
| Test Results |  |
| Comments |  |
| Date of Testing |  |
| Test Personnel |  |

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| --- | --- |
| Test Case ID | REG.T7 \*not ready for build 1 |
| Description | Enable replication of registry contents |
| Test Steps |  |
| Test Results |  |
| Comments |  |
| Date of Testing |  |
| Test Personnel |  |

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| --- | --- |
| Test Case ID | REG.T8 \*not ready for build 1 |
| Description | Verify registry contents |
| Test Steps |  |
| Test Results |  |
| Comments |  |
| Date of Testing |  |
| Test Personnel |  |

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| --- | --- |
| Test Case ID | RPT.T1. RPT.T2, RPT.T3, RPT.T4, RPT.T5 |
| Description | Various requirements regarding reporting |
| Test Steps | Commercial applications, in particular Sawmill, provide the functionality required. Verification of installation suffices. |
| Test Results |  |
| Comments |  |
| Date of Testing |  |
| Test Personnel |  |

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| --- | --- |
| Test Case ID | SEC.T1 \*not ready for build 1 |
| Description | Create, update, or delete a user identity and a group identity. |
| Test Steps |  |
| Test Results |  |
| Comments |  |
| Date of Testing |  |
| Test Personnel |  |

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| --- | --- |
| Test Case ID | SEC.T2 \*not ready for build 1 |
| Description | Add or remove a user from a group. |
| Test Steps |  |
| Test Results |  |
| Comments |  |
| Date of Testing |  |
| Test Personnel |  |

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| --- | --- |
| Test Case ID | SEC.T3 \*not ready for build 1 |
| Description | Capture identifying information associated with a user identity. |
| Test Steps |  |
| Test Results |  |
| Comments |  |
| Date of Testing |  |
| Test Personnel |  |

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| --- | --- |
| Test Case ID | SEC.T4 \*not ready for build 1 |
| Description | Encrypt transmission of identifying credentials. |
| Test Steps |  |
| Test Results |  |
| Comments |  |
| Date of Testing |  |
| Test Personnel |  |

## Anomalies

The JIRA issue tracking system (http://www.atlassian.com/software/jira) is being used to capture discrepancies found during testing.

Only 1 minor anomaly was found and reported to the development team, and it has been fixed for the next build. See the comments to AATESTME.T7

### Issues Entered

<https://oodt.jpl.nasa.gov/jira/browse/PDS-1>

For the full JIRA list, http://oodt.jpl.nasa.gov/jira/browse/PDS

### Major Issues

None.

### Open anomalies

None.

## Test Data

All necessary test data reside in build1aTestFiles.zip

## 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