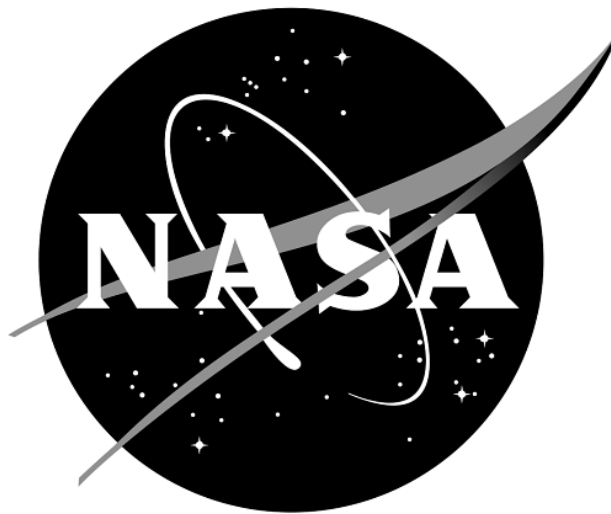

Plan Document

NASA Planetary Data System

PDS4 System

Build 3b Test Procedures &
Report



Change Log

Revision	Date	Description	Author
Draft		Initial draft release.	
1c	May 16, 2011	Modified many tests to work with build 1c of Harvest and Registry. Other minor revisions.	Richard Chen
1d	Oct 24, 2011	Updated for build 1d	Richard Chen
2a	Nov 11, 2011	Updated for build 2a	Richard Chen
2b	Feb 28, 2012	Updated for build 2b	Richard Chen
2b.1	Mar 7, 2012	Re-added HVT.T3, expanded SCH.T5	Richard Chen
2c	Jul 17, 2012	Updated for build 2c	Richard Chen
3a	Oct 26, 2012	Added BNDL.T1 to .T4	Richard Chen
3b	Apr 09, 2013	Added AAFUNCTION.*	Richard Chen
3b.1	Aug 30, 2013	Incorporated JIRA resolutions	Richard Chen
3b.2	Sept 14, 2013	Cleaned up and removed not applicable test procedures	Richard Chen, Emily Law

Contents

CHANGE LOG.....	II
1 INTRODUCTION	1
1.1 Purpose and Scope.....	1
1.2 Document Revision.....	1
1.3 Applicable Documents.....	1
2 EXECUTIVE SUMMARY	3
2.1 Assessment.....	3
2.2 Major Findings.....	3
2.3 Success	3
2.4 Metrics.....	3
3 TEST PROCEDURES	4
3.1 Setup.....	4
3.2 Testing of Bundle Processing.....	5
3.3 Testing for Complete Coverage of PDS4 Level 5 Requirements	12
4 ANOMALIES	61
4.1 Issues Entered	61
4.2 Major Issues	62
4.3 Open anomalies.....	62
5 TEST DATA	63
APPENDIX A: ACRONYMS.....	64

1 Introduction

1.1 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 PDS4 system deployed for Build 3b. It verifies that PDS4 system Build 3b is compliant with Build 3 requirements, and ensures that the system functions are without critical defects. The Test Traceability Matrix can be found in the PDS4 Build 3b Test Plan Section 4 (<http://pds.nasa.gov/pds4/orr0913/build3bTestPlanEN.pdf>).

For PDS4 Build 3b, the following software will be deployed at the EN:

- Ingest: Harvest, Catalog
- Preparation: Core, Design, Generate, Transform, Validate
- Registry
- Report
- Search: Core, Service, User Interface
- Security

Test resources will include EN developers to support unit testing, and an Integration Team (which consists of EN and Node staff) to perform integration testing.

1.2 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.

1.3 Applicable Documents

1.3.1 Controlling Documents

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

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

1.3.2 Referenced Documents

[3] PDS4 Project Plan, July 2013.

[4] PDS4 Operations Concept, September 2013.

[4] System Architecture Specification, September 2013.

[5] General System Requirements, September 2013.

[6] Software Requirements and Design, 2013

[7] PDS4 Standards Documents, 2013

2 Executive Summary

2.1 Assessment

The tools and services tested work with the versions specified.

2.2 Major Findings

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

2.3 Success

Tools and services performed as documented.

2.4 Metrics

This section provides a summary of the test metrics

# of tests performed	# of tests passed	# of tests failed	# of high priority anomalies
45	45	0	0

3 Test Procedures

The following section lists procedures and results for the test cases identified in Section 3 of the PDS4 System Build 3b Test Plan. These tests will be run as necessary to re-test the system after software changes.

Section 3.2 below contains 1 sequence of tests that demonstrates how a bundle of products passes through the PDS4 software.

Section 3.3 contains many tests that demonstrate the broader functionality of the PDS4 software.

3.1 Setup

The tests in section 3.2 require the installation of the following PDS4 software:

- **Harvest**, <http://pds-engineering.jpl.nasa.gov/pds2010/development/pds4/ingest/harvest>
- **Registry**, <http://pds-engineering.jpl.nasa.gov/pds2010/development/pds4/registry/registry-service>
- **Search**, <http://pds-engineering.jpl.nasa.gov/pds2010/development/pds4/search>
- **Validate**, <http://pds-engineering.jpl.nasa.gov/pds2010/development/pds4/preparation/validate>
- **Registry UI**, <http://pds-engineering.jpl.nasa.gov/pds2010/development/pds4/registry/registry-ui>
- an **XML editor**, e.g. Oxygen. This can be skipped, though not recommended.
- an XML-friendly web **browser**, e.g. firefox

The tests in Section 3.3 require the installation of the software above as well as:

- **Generate**, <http://pds-engineering.jpl.nasa.gov/pds2010/development/pds4/preparation/generate>
- **Catalog**, <http://pds-engineering.jpl.nasa.gov/pds2010/development/pds4/ingest/catalog>
- **curl**, a command-line utility to access a URL, used here to manipulate a registry. The Registry Service Guide has more information. This is native to most versions of unix.

Please follow the installation instructions carefully. For more help, the file NOTES.txt, created during SETUP below, details one tester's configuration experience. Note that the tests are written for Unix, but running on other platforms requires simple changes.

In the tests in the rest of this document, replace

<i>testDir</i>	directory where input files are extracted
<i>binDir</i>	directory where the PDS4 software are installed
harvest	If the registry is uncontrolled, do not replace. Else: <code>harvest -uusername -ppassword</code> Also add " <code>-k keystorePassword</code> " depending on the registry configuration, especially if Harvest gives error "Keystore password must be specified"

curl	If the registry is uncontrolled, do not replace. Else: curl -uusername:password -k
http://localhost:8080 or https://potato.jpl.nasa.gov	Use the URL of the registry

The tests in Sections 3.2 and 3.3 require this:

Test Case ID	SETUP
Description	This is not a test. This sets up test data.
Test Steps	<p>Get the latest "Test Data (.tgz)" from http://pds-engineering.jpl.nasa.gov/index.cfm?pid=145&cid=187 Then</p> <ul style="list-style-type: none"> • mkdir <i>testDir</i> • cd <i>testDir</i> • unzip PDS4test.build3b.zip • mkdir holdings • (take care not to overwrite existing files) <p>cd \$CATALINA_HOME/webapps; tar xzf <i>testDir/webStuff.201303.tgz</i></p>

The registry is the central service. It can reside locally or remotely, controlled or uncontrolled. If remote, it need not be installed. If local, testing is easier, but installation and configuration of it and of the required Apache Tomcat server can be difficult.

Many test sequences in this document assume a local, uncontrolled registry, which may get corrupted during testing. The following step resets the registry:

Test Case ID	RESETREGISTRY
Description	This is not a test. This wipes the database and the search indices clean. <i>dbDir</i> is the directory for the database, set during the initialization of Tomcat.
Test Steps	<pre> \$CATALINA_HOME/bin/shutdown.sh rm -r binDir/search-service-1.2.0/pds/*data* rm binDir/search-service-1.2.0/pds/index/search-tools.hierarchy.xml rm binDir/search-service-1.2.0/pds/index/solr* rm -f -r dbDir mkdir dbDir cd binDir/registry-service-1.4.0 java -Djava.ext.dirs=lib/ org.apache.derby.tools.ij connect 'jdbc:derby:registry;create=true;user=registry'; run 'conf/derby-registry-schema.ddl'; exit; mv registry dbDir/registry rm derby.log \$CATALINA_HOME/bin/startup.sh # usually a pause is needed here cd binDir/registry-service-1.4.0/bin; ./registry-config </pre>

3.2 Testing of Bundle Processing

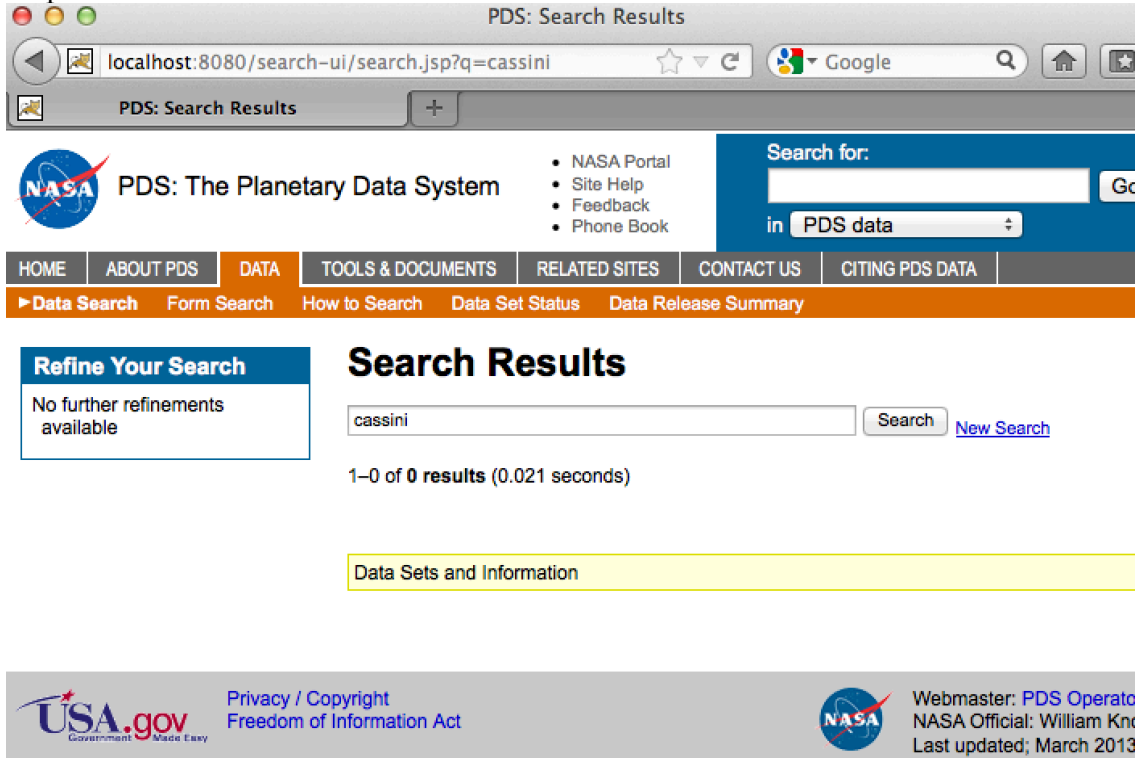
The AAFUNCTION sequence tests the PDS4 software's ability to process a bundle of products.

Test Case ID	AAFUNCTION.1
Description	Create a PDS4 Product Label using a design tool based on PDS's schema.
Test Steps	In general: <ul style="list-style-type: none"> Consult Append D of the Data Providers' Handbook (DPH), Version 0.3.10
Test Results	Creation of a label-template (xml) from the master-schema (xsd).
Comments	Results met test successful criteria
Date of Testing	2013.04.08
Test Personnel	Richard Chen

Test Case ID	AAFUNCTION.2
Description	Validate PDS4 label
Test Steps	<ol style="list-style-type: none"> cd <i>testDir</i>/context_bundle_20130326 validate . -x PDS4_PDS_0310b.xsd -S PDS4_PDS_0310b.sch -e "*.xml"
Test Results	<p>Step 2: This step produces much positive output, e.g.</p> <pre>PASS: file: <i>testDir</i>/context_bundle_20130326/./Product_Bundle_1.0.xml PASS: file: <i>testDir</i>/context_bundle_20130326/./context_attribute/aaCollection_1.0.xml PASS: file: <i>testDir</i>/context_bundle_20130326/./context_attribute/Product_20130322/attribute_a_axis_radius_1.0.xml 1 PASS: file: <i>testDir</i>/context_bundle_20130326/./context_attribute/Product_20130322/attribute_abstract_desc_1.0.xml 1 ...</pre> <p>To see better output, run step 2 as:</p> <ul style="list-style-type: none"> validate . -x PDS4_PDS_0310b.xsd -S PDS4_PDS_0310b.sch -e "*.xml" grep -v PASS uniq <p>which produces</p> <pre>PDS Validate Tool Report Configuration: Version 1.3.0 Time Mon, Apr 08 2013 at 10:45:02 PM Parameters: Target(s) [.] User-Specified Schemas [PDS4_PDS_0310b.xsd] User-Specified Schematrons [PDS4_PDS_0310b.sch] Severity Level Warnings Recurse Directories true File Filter(s) Used [*.xml] Validation Details: Summary: 26872 of 26872 file(s) processed, 0 skipped 26872 of 26872 file(s) passed validation End of Report</pre>
Comments	Results met test successful criteria
Date of Testing	2013.04.08
Test Personnel	Richard Chen

Test Case ID	AAFUNCTION.3
Description	Harvest PDS4 labels

Test Steps	<ol style="list-style-type: none"> 1. <code>cd testDir/context_bundle_20130326</code> 2. <code>harvest . -e "*.xml" -c ../harvest-policy-master.xml -l ../h.out</code>
Test Results	<p>Step 2: The log file produces much positive output, e.g.</p> <pre>INFO: XML extractor set to the following default namespace: http://pds.nasa.gov/pds4/pds/v03 INFO: [./Product_Bundle_1.0.xml] Begin processing. INFO: [./Product_Bundle_1.0.xml] line 38: Mapping reference type 'bundle_has_context_collection' to 'collection_ref'. INFO: [./Product_Bundle_1.0.xml] line 43: Mapping reference type 'bundle_has_context_collection' to 'collection_ref'. INFO: [./Product_Bundle_1.0.xml] line 48: Mapping reference type 'bundle_has_context_collection' to 'collection_ref'. INFO: [./Product_Bundle_1.0.xml] line 53: Mapping reference type 'bundle_has_context_collection' to 'collection_ref'. INFO: [./Product_Bundle_1.0.xml] line 58: Mapping reference type 'bundle_has_context_collection' to 'collection_ref'.</pre> <p>To filter the output:</p> <ul style="list-style-type: none"> • <code>grep -v "SUCCESS\ INFO" h.out uniq</code> <p>which produces</p> <pre>PDS Harvest Tool Log Version Version 1.4.0 Time Tue, Apr 09 2013 at 06:09:07 AM Target(s) [.] File Inclusions [*.xml] Registry Location http://localhost:8080/registry Registry Package Name The standard harvest policy file, I think Registration Package GUID urn:uuid:4323547d-e92a-4928-85f6-7ce1eb2a0f32 WARNING: [./context_attribute/aaCollection_1.0.xml] Product not found in registry for reference: urn:nasa:pds:context_pds3:attribute:attribute.ch1:apollo16_correction_file_name::1.0. LIDVID will be used as the target reference for the association. ... WARNING: [./context_attribute/aaCollection_1.0.xml] Product not found in registry for reference: urn:nasa:pds:context_pds3:attribute:attribute.mro:weighting_function_name::1.0. LIDVID will be used as the target reference for the association. Summary: 26872 of 26872 file(s) processed, 0 other file(s) skipped 0 error(s), 500 warning(s) 26872 of 26872 products registered. 26885 of 26885 ancillary products registered. Product Types Registered: 4190 Product_Target_PDS3 2079 Product_Data_Set_PDS3 1993 Product_Attribute_Definition 589 Product_Instrument_PDS3 68 Product_Mission_PDS3 1458 Product_Subscription_PDS3 79 Product_Class_Definition 8212 Product_Context 187 Product_Instrument_Host_PDS3 13 Product_Collection 5338 Product_Volume_PDS3 2665 Product_Volume_Set_PDS3 1 Product_Bundle 26885 Product_File_Repository 53743 of 53743 associations registered. End of Log1</pre>
Comments	<p>Results met test successful criteria.</p> <p>Notes: The WARNINGS indicate that the product being harvested has associations with products not yet harvested. They are not issues.</p>
Date of Testing	2013.04.09
Test Personnel	Richard Chen

Test Case ID	AAFUNCTION.4
Description	Search for PDS4 data.
Test Steps	<p>Build the search index</p> <ol style="list-style-type: none"> 1. In a browser, http://localhost:8080/search-ui 2. Beneath "Data Search" in the middle of the page, type "cassini" 3. <code>search-core -d -H binDir/search-service-1.2.0/pds -r http://localhost:8080/registry >& s1.out</code> This may be slow. <code>binDir/search-service-1.2.0/pds</code> should grow constantly. 4. <code>cd binDir/search-core-1.2.0/bin</code> 5. <code>solr-post binDir/search-service-1.2.0/pds http://localhost:8080/search-service/pds > testDir/s2.out</code> 6. Repeat steps 1 and 2
Test Results	<p>Step 2:</p>  <p>The screenshot shows a web browser window titled "PDS: Search Results" with the URL <code>localhost:8080/search-ui/search.jsp?q=cassini</code>. The page header includes the NASA logo and "PDS: The Planetary Data System". A search bar contains "cassini" and a dropdown menu is set to "PDS data". The search results section displays "1-0 of 0 results (0.021 seconds)".</p> <p>The previous test (AAFUNCTION.3) harvests/registers a bundle, but the search index has not been built. That's why step 2 shows that searching for "cassini" gives 0 results. Steps 3 and 5 below build the index, causing the search now succeeds.</p> <p>Step 3 writes much output to stderr, captured in s1.out, which has:</p> <pre> ----- ---- RUNNING IN DEBUG MODE ---- ----- Apr 9, 2013 1:12:18 PM gov.nasa.pds.search.core.extractor.RegistryExtractor createOutputs INFO: Create registry dir: /PDS4tools/search-service-1.2.0/pds/registry-data Apr 9, 2013 1:12:18 PM gov.nasa.pds.search.core.SearchCoreLauncher runRegistryExtractor INFO: Registry URL: http://localhost:8080/registry Search Home: /PDS4tools/search-service-1.2.0/pds Config Home: /PDS4tools/search-core-1.2.0/conf/pds/pds3 Apr 9, 2013 1:12:18 PM gov.nasa.pds.search.core.extractor.RegistryExtractor run INFO: ----- Beginning Registry Data Extraction ----- Apr 9, 2013 1:12:18 PM gov.nasa.pds.search.core.extractor.RegistryExtractor run INFO: Registry URL: http://localhost:8080/registry Apr 9, 2013 1:12:18 PM gov.nasa.pds.search.core.extractor.RegistryExtractor run INFO: ----- </pre>

```
Apr 9, 2013 1:12:18 PM gov.nasa.pds.search.core.extractor.RegistryExtractor run
INFO: Querying Investigation objects
Starting with outSeqNum: 10000
---- * ----
---- urn:nasa:pds:context_pds3:investigation:mission.phobos_2 ----
---- urn:nasa:pds:context_pds3:investigation:mission.giotto ----
---- urn:nasa:pds:context_pds3:investigation:mission.viking ----
---- urn:nasa:pds:context_pds3:investigation:mission.pioneer ----
---- urn:nasa:pds:context_pds3:investigation:mission.venus_express ----
...

```

Step 5 writes muct to stdout, captured in s2.out, which has:

```
-----
Posting index to SOLR
-----

<?xml version="1.0" encoding="UTF-8"?>
<response>
<lst name="responseHeader"><int name="status">0</int><int name="QTime">130</int></lst>
</response>
Backing up '/PDS4tools/search-service-1.2.0/pds/data' to '/PDS4tools/search-service-
1.2.0/pds/data_old'
Running XSLT transformation...
/PDS4tools/search-service-1.2.0/pds
java -Xmx256m -jar /PDS4tools/search-service-1.2.0/pds/./lib/saxon-9.jar "-s:/PDS4tools/search-core-
1.2.0/bin/./facets/search-tools.xml" "-xsl:/PDS4tools/search-core-1.2.0/bin/./facets/add-
hierarchy.xslt" "-o:/PDS4tools/search-service-1.2.0/pds/index/search-tools.hierarchy.xml"
<?xml version="1.0" encoding="UTF-8"?>
<response>
<lst name="responseHeader"><int name="status">0</int><int name="QTime">1437</int></lst>
</response>
/PDS4tools/search-service-1.2.0/pds/index/solr_index.xml.0
/PDS4tools/search-service-1.2.0/pds/index/solr_index.xml.1
/PDS4tools/search-service-1.2.0/pds/index/solr_index.xml.2
/PDS4tools/search-service-1.2.0/pds/index/solr_index.xml.3
/PDS4tools/search-service-1.2.0/pds/index/solr_index.xml.4
/PDS4tools/search-service-1.2.0/pds/index/solr_index.xml.5
/PDS4tools/search-service-1.2.0/pds/index/solr_index.xml.6
/PDS4tools/search-service-1.2.0/pds/index/solr_index.xml.7
Running XSLT transformation...
/PDS4tools/search-service-1.2.0/pds
...

```


Step 6:

PDS: Data Search

localhost:8080/search-ui/

PDS: Data Search

PDS Engineering Node - Welco...



PDS: The Planetary Data System

Search for: Go

in PDS data

- NASA Portal
- Site Help
- Feedback
- Phone Book

HOME ABOUT PDS DATA TOOLS & DOCUMENTS RELATED SITES CONTACT US CITING PDS DATA

Data Search Form Search How to Search Data Set Status Data Release Summary

Quick Searches

- Mars Science Laboratory
- Mercury
- Venus
- Mars
- Jupiter
- Saturn
- Uranus, Neptune, Pluto
- Rings
- Asteroids
- Comets
- Planetary Dust
- Earth's Moon
- Solar Wind

Data Search

Search

Begin your search with one of the quick searches on the left, or try any of the following:

- A target name like **mars** or **eros**
- An instrument name or type like **spectrometer** or **laser altimeter** or **MOLA**
- A target body type like **asteroid**
- A word or phrase to find in the description of a data set or search tool

You can further refine your query by:

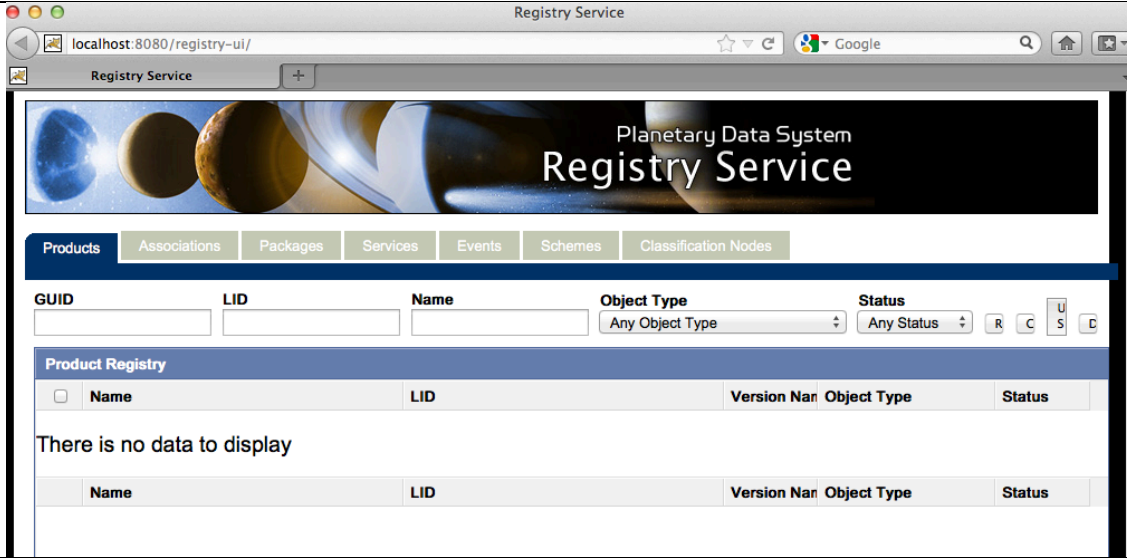
- Use quotation marks to bind words that occur together, e.g. **"mars express"**
- Specifying a search field before the word to search, e.g. **target:mars**
 - The legal search fields are **target:**, **instrument:**, **mission:**, **instrument_type:**
- Inserting logical operator **OR** or **AND**, e.g. **target:uranus OR target:neptune**

Step 6:

	<p>The screenshot shows a web browser window titled "PDS: Search Results" with the URL "localhost:8080/search-ui/search.jsp?q=cassini". The page header includes the NASA logo and "PDS: The Planetary Data System". A search bar contains "cassini" and a "Go" button. Below the search bar is a navigation menu with options like "HOME", "ABOUT PDS", "DATA", "TOOLS & DOCUMENTS", "RELATED SITES", "CONTACT US", and "CITING PDS DATA". The main content area is titled "Search Results" and shows "1-50 of 185 results (0.013 seconds)". A "Refine Your Search" sidebar on the left lists various filters such as "Type", "Target", and "Investigation". The main results section includes "Search Tools" and "Data Sets and Information" with details for targets like MASURSKY, FOMALHAUT, and SPICA, and data sets like CASSINI RSS RAW DATA SET - ENGR6 V1.0.</p>
Comments	<p>Results met test successful criteria</p> <p>Notes: search-core may fail if testbed does not have enough memory with following message near the bottom of \$CATALINA_HOME/logs/catalina.out <pre>java.lang.OutOfMemoryError: Java heap space</pre></p> <p>There is no issue with testbed that has sufficient memory. The following workaround were implemented: in .cshrc</p> <ul style="list-style-type: none"> • <code>setenv JAVA_OPTS "-Xmx256m"</code> <p>Another way to reduce memory demands is to reduce the size of the harvested files. Flush the database, then before harvest and search-core, for each context_dataset file:</p> <ul style="list-style-type: none"> • <code>testDir/bin/chopMiddle.py -a"<data_set_desc>" -b"</data_set_desc>" -c "shortened" -O context_dataset/Product_20130322/eachFile.xml</code> • <code>testDir/bin/chopMiddle.py -a"<confidence_level_note>" -b"</confidence_level_note>" -c "short2" -O context_dataset/Product_20130322/eachFile.xml</code>
Date of Testing	2013.04.09
Test Personnel	Richard Chen

3.3 Testing for Complete Coverage of PDS4 Level 5 Requirements

The following test cases test all Build 3b functions, including those not covered above. These tests ensure complete verification and validation of Build 3b level 5 requirements.

Test Case ID	AATESTME.1
Description	Query for a registered artifact
Test Steps	Verify in browser: http://localhost:8080/registry-ui If "Product Registry" shows rows of data, type "urn:nasa:pds:TESTING*" in LID, then hit "Update", or run RESETREGISTRY in Section 3.1 If registry-ui is not installed, http://localhost:8080/registry/extrinsics/logicals/urn:nasa:pds:TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-V1.0
Test Results	
Comments	Results met test successful criteria
Date of Testing	2013.04.08
Test Personnel	Richard Chen

Test Case ID	AATESTME.2
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, 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: <pre><?xml version="1.0" encoding="UTF-8"?> <?xml-model href="http://pds.jpl.nasa.gov/repository/pds4/examples/dph_examples_3a/dph_example_archive_VG</pre>

```

2PLS/schemas/PDS4_PDS_0300a.sch"?>
<Product_Observational xmlns="http://pds.nasa.gov/pds4/pds/v03"
  xmlns:pds="http://pds.nasa.gov/pds4/pds/v03"
  xmlns:dph="http://pds.nasa.gov/pds4/dph/v01"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://pds.nasa.gov/pds4/pds/v03
http://pds.jpl.nasa.gov/repository/pds4/examples/dph_examples_3a/dph_example_archive_VG2PLS
/schemas/PDS4_PDS_0300a.xsd
  http://pds.nasa.gov/pds4/dph/v01
http://pds.jpl.nasa.gov/repository/pds4/examples/dph_examples_0900/dph_example_products/local
_dictionaries/dph_example_dict_0900.xsd">
  <Identification_Area>

<logical_identifier>urn:nasa:pds:TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Im
age.MPFL-M-IMP-2-EDR-V1.0</logical_identifier>
  <version_id>1.0</version_id>
  <title>MARS
    PATHFINDER LANDER Experiment</title>
  <information_model_version>0.3.0.0.a</information_model_version>
  <product_class>Product_Observational</product_class>
  <Modification_History>
    <Modification_Detail>
      <modification_date>2012-10-25</modification_date>
      <version_id>1.0</version_id>
      <description>
        extracted metadata from PDS3 catalog and
        modified to comply with PDS4 Information Model
      </description>
    </Modification_Detail>
  </Modification_History>
</Identification_Area>
<Observation_Area>
  <comment>Observational Intent</comment>
  <Time_Coordinates>
    <start_date_time>1997-07-07T23:48:33.442Z</start_date_time>
    <stop_date_time>1997-07-07T23:48:51.766Z</stop_date_time>
    <local_mean_solar_time>not applicable</local_mean_solar_time>
    <local_true_solar_time>not applicable</local_true_solar_time>
  </Time_Coordinates>
  <Investigation_Area>
    <name>MARS_PATHFINDER</name>
    <type>Mission</type>
    <Internal_Reference>

<lidvid_reference>urn:nasa:pds:TESTING:investigation.MARS_PATHFINDER::1.0</lidvid_reference>
    <reference_type>data_to_investigation</reference_type>
  </Internal_Reference>
</Investigation_Area>
  <Observing_System>
    <name>Observing System for MPFL+IMP</name>
    <Observing_System_Component>
      <name>MPFL</name>
      <observing_system_component_type>Spacecraft</observing_system_component_type>
      <description>instrument_host MPFL</description>
      <Internal_Reference>
        <lid_reference>urn:nasa:pds:TESTING:instrument_host.MPFL</lid_reference>
        <reference_type>is_instrument_host</reference_type>
      </Internal_Reference>
    </Observing_System_Component>
    <Observing_System_Component>
      <name>TT</name>
      <observing_system_component_type>Instrument</observing_system_component_type>
      <description>instrument TT</description>
      <Internal_Reference>
        <lid_reference>urn:nasa:pds:TESTING:instrument.IMP__MPFL</lid_reference>
        <reference_type>is_instrument</reference_type>
      </Internal_Reference>
    </Observing_System_Component>
  </Observing_System>
  <Target_Identification>
    <name>MARS</name>
    <type>planet</type>

```



```

<description>description of MARS goes here</description>
<Internal_Reference>
  <lidvid_reference>urn:nasa:pds:TESTING:target.MARS::1.0</lidvid_reference>
  <reference_type>data_to_target</reference_type>
</Internal_Reference>
</Target_Identification>
<!-- ===== -->
<!-- Reference the attributes that were imported from the -->
<!-- local dictionary (using the local namespace (dph) -->
<!-- ===== -->
</Observation_Area>
<Reference_List>
  <Internal_Reference>
<lidvid_reference>urn:nasa:pds:TESTING:investigation.MARS_PATHFINDER::1.0</lidvid_reference>
  <reference_type>data_to_document</reference_type>
</Internal_Reference>
  <Internal_Reference>
    <lid_reference>urn:nasa:pds:TESTING:instrument_host.MPFL</lid_reference>
    <reference_type>data_to_document</reference_type>
  </Internal_Reference>
  <Internal_Reference>
    <lid_reference>urn:nasa:pds:TESTING:instrument.IMP_MPFL</lid_reference>
    <reference_type>data_to_document</reference_type>
  </Internal_Reference>
  <Internal_Reference>
    <lid_reference>urn:nasa:pds:TESTING:target.MARS</lid_reference>
    <reference_type>data_to_document</reference_type>
  </Internal_Reference>
  <Internal_Reference>
    <lid_reference>urn:nasa:pds:node.IMG</lid_reference>
    <reference_type>data_to_document</reference_type>
  </Internal_Reference>
</Reference_List>
<File_Area_Observational>
  <File>
    <file_name>i943630r.raw</file_name>
    <local_identifier>i943630r.raw</local_identifier>
    <creation_date_time>2009-05-04T13:46:30.1158Z</creation_date_time>
    <file_size unit="byte">126976</file_size>
    <records>270</records>
    <md5_checksum>d220dac0d1fe312f3f3b9c824f6ac294</md5_checksum>
  </File>
  <Array_2D_Image>
    <local_identifier>MPFL-M-IMP_IMG_GRAYSCALE</local_identifier>
    <offset unit="byte">0</offset>
    <axes>2</axes>
    <axis_index_order>Last_Index_Fastest</axis_index_order>
    <encoding_type>Binary</encoding_type>
    <Element_Array>
      <data_type>UnsignedMSB2</data_type>
      <unit>data number</unit>
      <scaling_factor>0</scaling_factor>
      <value_offset>0</value_offset>
    </Element_Array>
    <Axis_Array>
      <axis_name>Line</axis_name>
      <elements>248</elements>
      <unit>not applicable</unit>
      <sequence_number>1</sequence_number>
    </Axis_Array>
    <Axis_Array>
      <axis_name>Sample</axis_name>
      <elements>256</elements>
      <unit>not applicable</unit>
      <sequence_number>2</sequence_number>
    </Axis_Array>
  <Object_Statistics>
    <local_identifier>MPFL_M_IMP_STATISTICS</local_identifier>
    <maximum>4095</maximum>
    <minimum>145</minimum>
    <mean>1385.3000</mean>

```

	<pre> <standard_deviation>538.0290</standard_deviation> </Object_Statistics> <Display_2D_Image> <line_display_direction>Up</line_display_direction> <sample_display_direction>Right</sample_display_direction> </Display_2D_Image> </Array_2D_Image> </File_Area_Observational> </Product_Observational> </pre>
Test Results	File minimalImage.xml sits in directory holdings/.
Comments	Results met test successful criteria
Date of Testing	2013.04.08
Test Personnel	Richard Chen

Test Case ID	AATESTME.3
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. Registry relates artifacts via (LID-based) association.
Test Steps	<ol style="list-style-type: none"> 1. Create the data file referred to in the label: touch holdings/i943630r.raw 2. Register holdings/minimalImage.xml, as its <Product_Observational> matches one of harvest-policy-master.xml's <candidates><productMetadata>: harvest testDir/holdings -c harvest-policy-master.xml 3. Verify the product registration: http://localhost:8080/registry-ui 4. Verify the registration of LID-based associations: http://localhost:8080/registry/extrinsics/logicals/urn:nasa:pds:TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-V1.0
Test Results	<p>Step 2 returns the following:</p> <pre> PDS Harvest Tool Log Version Version 1.4.0 Time Mon, Apr 08 2013 at 02:55:39 PM Target(s) [holdings] Severity Level INFO Registry Location http://localhost:8080/registry Registry Package Name The standard harvest policy file, I think Registration Package GUID urn:uuid:df5a0484-6d73-4776-bf91-016da25f97da INFO: XML extractor set to the following default namespace: http://pds.nasa.gov/pds4/pds/v03 INFO: [holdings/i943630r.raw] Begin processing. ERROR: [holdings/i943630r.raw] Premature end of file. INFO: [holdings/minimalImage.xml] Begin processing. INFO: [holdings/minimalImage.xml] line 42: Mapping reference type 'data_to_investigation_ref' to 'investigation_ref'. INFO: [holdings/minimalImage.xml] line 53: Mapping reference type 'is_instrument_host' to 'instrument_host_ref'. INFO: [holdings/minimalImage.xml] line 62: Mapping reference type 'is_instrument' to 'instrument_ref'. INFO: [holdings/minimalImage.xml] line 72: Mapping reference type 'data_to_target' to 'target_ref'. INFO: [holdings/minimalImage.xml] line 83: Mapping reference type 'data_to_document' to 'document_ref'. INFO: [holdings/minimalImage.xml] line 87: Mapping reference type 'data_to_document' to 'document_ref'. INFO: [holdings/minimalImage.xml] line 91: Mapping reference type 'data_to_document' to 'document_ref'. INFO: [holdings/minimalImage.xml] line 95: Mapping reference type 'data_to_document' to 'document_ref'. INFO: [holdings/minimalImage.xml] line 99: Mapping reference type 'data_to_document' to 'document_ref'. INFO: [holdings/minimalImage.xml] Setting LIDVID-based association, 'urn:nasa:pds:TESTING:investigation.MARS_PATHFINDER.:1.0', under slot name 'investigation_ref'. INFO: [holdings/minimalImage.xml] Setting LID-based association, </pre>

'urn:nasa:pds:TESTING:instrument_host.MPFL', under slot name 'instrument_host_ref'.
INFO: [holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:TESTING:instrument.IMP__MPFL', under slot name 'instrument_ref'.
INFO: [holdings/minimalImage.xml] Setting LIDVID-based association, 'urn:nasa:pds:TESTING:target.MARS::1.0', under slot name 'target_ref'.
INFO: [holdings/minimalImage.xml] Setting LIDVID-based association, 'urn:nasa:pds:TESTING:investigation.MARS_PATHFINDER::1.0', under slot name 'document_ref'.
INFO: [holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:TESTING:instrument_host.MPFL', under slot name 'document_ref'.
INFO: [holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:TESTING:instrument.IMP__MPFL', under slot name 'document_ref'.
INFO: [holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:TESTING:target.MARS', under slot name 'document_ref'.
INFO: [holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:node.IMG', under slot name 'document_ref'.
SUCCESS: [holdings/minimalImage.xml] Successfully registered product:
urn:nasa:pds:TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-V1.0::1.0
INFO: [holdings/minimalImage.xml] Product has the following GUID: [urn:uuid:a37cfcab-196a-46db-907d-97cf43514a85](#)
INFO: [holdings/minimalImage.xml] Capturing file information for minimalImage.xml
INFO: [holdings/minimalImage.xml] Capturing file object metadata for i943630r.raw
INFO: [holdings/minimalImage.xml] Found checksum in the product label for file object 'holdings/i943630r.raw': d220dac0d1fe312f3f3b9c824f6ac294
SUCCESS: [holdings/minimalImage.xml] Successfully registered product:
urn:nasa:pds:TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-V1.0:minimalImage.xml::1.0
INFO: [holdings/minimalImage.xml] Product has the following GUID: [urn:uuid:8d6af8cf-5520-438b-bcec-7fb3f3ecbc77](#)
SUCCESS: [holdings/minimalImage.xml] Successfully registered product:
urn:nasa:pds:TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-V1.0:i943630r.raw::1.0
INFO: [holdings/minimalImage.xml] Product has the following GUID: [urn:uuid:58ae845d-5c27-4dee-859f-84de310f0595](#)
SUCCESS: [holdings/minimalImage.xml] Successfully registered association to
urn:nasa:pds:TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-V1.0:minimalImage.xml::1.0
INFO: [holdings/minimalImage.xml] Association has the following GUID: urn:uuid:e22fdfb2-ca87-49cd-afa1-daa3207d93fa
SUCCESS: [holdings/minimalImage.xml] Successfully registered association to
urn:nasa:pds:TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-V1.0:i943630r.raw::1.0
INFO: [holdings/minimalImage.xml] Association has the following GUID: urn:uuid:f01a3634-40dd-485d-8788-54456dbced96
Summary:
1 of 3 file(s) processed, 0 other file(s) skipped
1 error(s), 0 warning(s)
1 of 1 products registered.
2 of 2 ancillary products registered.
Product Types Registered:
1 Product_Observational
2 Product_File_Repository
2 of 2 associations registered.
End of Log

Step 3 shows the registration of the product referred to in minimalImage.xml as well as two extra products associated with this product: the metadata file (i.e. the label) minimalImage.xml and the data file i943630r.raw.

Planetary Data System
Registry Service

Products Associations Packages Services Events Schemes Classification Nodes

GUID LID Name Object Type Status

Any Object Type Any Status R C U S D

<input type="checkbox"/>	Name	LID	Version Name	Object Type	Status
<input type="checkbox"/>	i943630r	urn:nasa:pds:TESTING:example.DPH.sampleF	1.0	Product_File_Repository	Submitted
<input type="checkbox"/>	minimallmage	urn:nasa:pds:TESTING:example.DPH.sampleF	1.0	Product_File_Repository	Submitted
<input type="checkbox"/>	MARS PATHFINDER LANDER Experiment	urn:nasa:pds:TESTING:example.DPH.sampleF	1.0	Product_Observational	Submitted

Step 4 shows associations to products with LIDs
 urn:nasa:pds:TESTING:investigation.MARS_PATHFINDER::1.0,
 urn:nasa:pds:TESTING:target.MARS, urn:nasa:pds:TESTING:instrument_host.MPFL,
 urn:nasa:pds:TESTING:instrument.IMP__MPFL

	 <pre> <ns2:response> - <ns2:results> - <ns2:extrinsicObject versionName="1.0" status="Submitted" objectType="Product_Observational" name="MARS PATHFINDER LANDER Experiment" lid="urn:nasa:pds:TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP- 2-EDR-V1.0" home="http://localhost:8080/registry" guid="urn:uuid:a37cfcab-196a-46db-907d-97cf43514a85"> - <ns2:slot name="target_name" id="142"> <ns2:value>MARS</ns2:value> </ns2:slot> - <ns2:slot name="data_class" id="143"> <ns2:value>Array_2D_Image</ns2:value> </ns2:slot> - <ns2:slot name="information_model_version" id="144"> <ns2:value>0.3.0.0.a</ns2:value> </ns2:slot> - <ns2:slot name="observation_stop_date_time" id="145"> <ns2:value>1997-07-07T23:48:51.766Z</ns2:value> </ns2:slot> - <ns2:slot name="instrument_ref" id="146"> <ns2:value>urn:nasa:pds:TESTING:instrument.IMP_MPFL</ns2:value> </ns2:slot> - <ns2:slot name="modification_version_id" id="147"> <ns2:value>1.0</ns2:value> </ns2:slot> - <ns2:slot name="modification_description" id="148"> - <ns2:value> extracted metadata from PDS3 catalog and modified to comply with PDS4 Information Model </ns2:value> </ns2:slot> - <ns2:slot name="observation_comment" id="149"> <ns2:value>Observational Intent</ns2:value> </ns2:slot> - <ns2:slot name="target_ref" id="150"> <ns2:value>urn:nasa:pds:TESTING:target.MARS::1.0</ns2:value> </ns2:slot> - <ns2:slot name="investigation_ref" id="151"> - <ns2:value> urn:nasa:pds:TESTING:investigation.MARS_PATHFINDER::1.0 </ns2:value> </ns2:slot> - <ns2:slot name="target_type" id="152"> <ns2:value>planet</ns2:value> </ns2:slot> - <ns2:slot name="modification_date" id="153"> <ns2:value>2012.10.25</ns2:value> </ns2:slot> </ns2:extrinsicObject> </ns2:results> </ns2:response> </pre>
Comments	Results met test successful criteria
Date of Testing	2013.04.08
Test Personnel	Richard Chen

Test Case ID	AATESTME.4
Description	Authorize only authenticated users access to a controlled capacity.
Test Steps	1. harvest -uusername -pBAD_PASSWORD -k testDir/holdings -c harvest-policy-master.xml
Test Results	Step 1: <pre> <html><head><title>Apache Tomcat/7.0.4 - Error report</title><style><!--H1 {font-family:Tahoma,Arial,sans-serif;color:white;background-color:#525D76;font-size:22px;} H2 {font-family:Tahoma,Arial,sans-serif;color:white;background-color:#525D76;font-size:16px;} H3 {font- </pre>

	<pre> family:Tahoma,Arial,sans-serif;color:white;background-color:#525D76;font-size:14px;} BODY {font-family:Tahoma,Arial,sans-serif;color:black;background-color:white;} B {font-family:Tahoma,Arial,sans-serif;color:white;background-color:#525D76;} P {font-family:Tahoma,Arial,sans-serif;background:white;color:black;font-size:12px;} A {color : black;} A.name {color : #525D76;}-></style> </head><body><h1>HTTP Status 401 - </h1><HR size="1" noshade="noshade"><p>type Status report</p><p>message <u></u></p><p>description <u>This request requires HTTP authentication ().</u></p><HR size="1" noshade="noshade"><h3>Apache Tomcat/7.0.4</h3></body></html> Summary: 0 of 0 file(s) processed, 0 skipped 0 of 0 products registered. 0 of 0 associations registered, 0 skipped End of Log </pre>
Comments	Results met test successful criteria
Date of Testing	2013.09.14
Test Personnel	Richard Chen

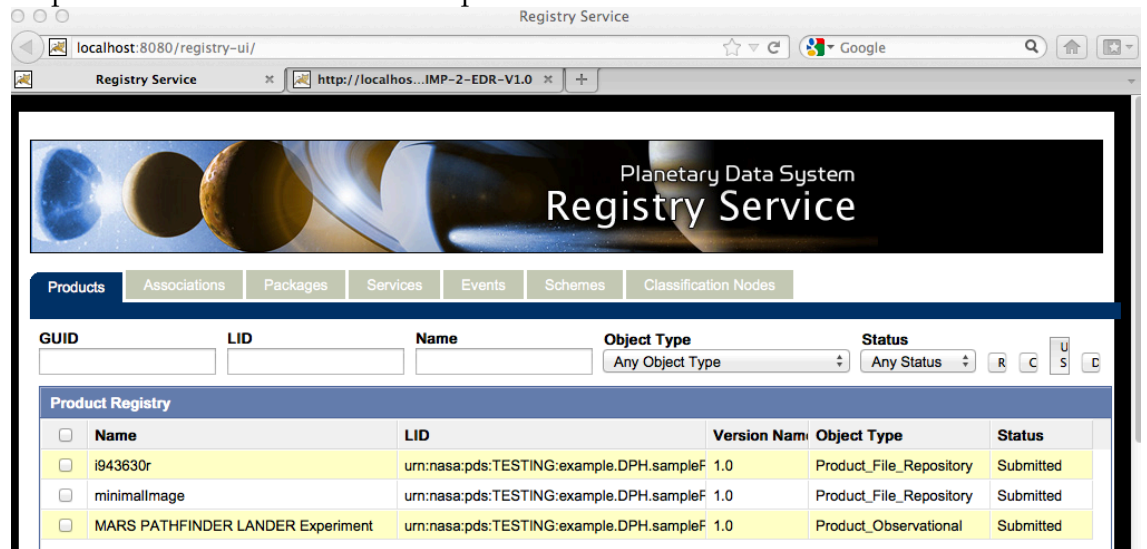
Test Case ID	AATESTME.5
Description	Harvest skips candidate products not matching configuration file. Harvest also checks for previous registrations and skips those.
Test Steps	<ol style="list-style-type: none"> 1. cp testAAtestme/unharvestedDoc.xml holdings/ 2. run harvest but with config file that does not accept Product_Document harvest <i>testDir</i>/holdings -c testAAtestme/harvestPolicyNoDoc.xml 3. In browser, check that no Product_Document was registered: http://localhost:8080/registry-ui 4. rm holdings/unharvestedDoc.xml # leave this next time and fix next test
Test Results	<p>Step 2: Note that both unharvestedDoc.xml and minimalImage.xml were rejected</p> <pre> PDS Harvest Tool Log Version Version 1.4.0 Time Mon, Apr 08 2013 at 05:49:36 PM Target(s) [holdings] Severity Level INFO Registry Location http://localhost:8080/registry Registry Package Name The standard harvest policy file, I think Registration Package GUID urn:uuid:f2523243-bc6c-450b-b443-f645526b9a75 INFO: XML extractor set to the following default namespace: http://pds.nasa.gov/pds4/pds/v03 INFO: [holdings/i943630r.raw] Begin processing. ERROR: [holdings/i943630r.raw] Premature end of file. INFO: [holdings/minimalImage.xml] Begin processing. INFO: [holdings/minimalImage.xml] line 42: Mapping reference type 'data_to_investigation' to 'investigation_ref'. INFO: [holdings/minimalImage.xml] line 53: Mapping reference type 'is_instrument_host' to 'instrument_host_ref'. INFO: [holdings/minimalImage.xml] line 62: Mapping reference type 'is_instrument' to 'instrument_ref'. INFO: [holdings/minimalImage.xml] line 72: Mapping reference type 'data_to_target' to 'target_ref'. INFO: [holdings/minimalImage.xml] line 83: Mapping reference type 'data_to_document' to 'document_ref'. INFO: [holdings/minimalImage.xml] line 87: Mapping reference type 'data_to_document' to 'document_ref'. INFO: [holdings/minimalImage.xml] line 91: Mapping reference type 'data_to_document' to 'document_ref'. INFO: [holdings/minimalImage.xml] line 95: Mapping reference type 'data_to_document' to 'document_ref'. INFO: [holdings/minimalImage.xml] line 99: Mapping reference type 'data_to_document' to 'document_ref'. INFO: [holdings/minimalImage.xml] Setting LIDVID-based association, 'urn:nasa:pds:TESTING:investigation.MARS_PATHFINDER:1.0', under slot name 'investigation_ref'. INFO: [holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:TESTING:instrument_host.MPFL', under slot name 'instrument_host_ref'. INFO: [holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:TESTING:instrument.IMP__MPFL', under slot name 'instrument_ref'. INFO: [holdings/minimalImage.xml] Setting LIDVID-based association, 'urn:nasa:pds:TESTING:target.MARS:1.0', under slot name 'target_ref'. INFO: [holdings/minimalImage.xml] Setting LIDVID-based association, </pre>

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'urn:nasa:pds:TESTING:investigation.MARS_PATHFINDER::1.0', under slot name 'document_ref'.
INFO: [holdings/minimalImage.xml] Setting LID-based association,
'urn:nasa:pds:TESTING:instrument_host.MPFL', under slot name 'document_ref'.
INFO: [holdings/minimalImage.xml] Setting LID-based association,
'urn:nasa:pds:TESTING:instrument.IMP_MPFL', under slot name 'document_ref'.
INFO: [holdings/minimalImage.xml] Setting LID-based association,
'urn:nasa:pds:TESTING:target.MARS', under slot name 'document_ref'.
INFO: [holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:node.IMG', under slot
name 'document_ref'.
ERROR: [holdings/minimalImage.xml] Product already exists:
urn:nasa:pds:TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-
2-EDR-V1.0:4.4
INFO: [holdings/unharvestedDoc.xml] Begin processing.
SKIP: [holdings/unharvestedDoc.xml] 'Product_Document' is not an object type found in the policy file.
Summary:
1 of 3 file(s) processed, 1 other file(s) skipped
2 error(s), 0 warning(s)
0 of 1 products registered.
0 of 0 ancillary products registered.
Product Types Registered:
0 of 0 associations registered.
End of Log

```

Step 3: same as AATESTME.3's step 3



Comments	Results met test successful criteria
Date of Testing	2013.04.08
Test Personnel	Richard Chen

Test Case ID	AATESTME.6
Description	Update and delete registered artifacts.
Test Steps	<ol style="list-style-type: none"> 1. In holdings/minimalImage.xml, change Identification_Area/version_id to 4.4 2. harvest testDir/holdings -c harvest-policy-master.xml 3. Verify in browser: http://localhost:8080/registry-ui 4. Delete the last 3 registrations by package. Step 2's output includes the package's GUID, assigned by harvest/registry. Replace guid below with it: curl -X DELETE -v http://localhost:8080/registry/packages/guid/members 5. Verify in browser: http://localhost:8080/registry-ui 6. AATESTME.3's output for step 2 includes GUIDs assigned by harvest/registry to the 3 version 1.0 products. For each, replace guid below with the GUID: curl -X DELETE -v http://localhost:8080/registry/extrinsics/guid 7. Verify in browser: http://localhost:8080/registry-ui

Test Results	<p>Step 2:</p> <p>PDS Harvest Tool Log Version Version 1.4.0 Time Mon, Apr 08 2013 at 05:04:52 PM Target(s) [holdings] Severity Level INFO Registry Location http://localhost:8080/registry Registry Package Name The standard harvest policy file, I think Registration Package GUID urn:uuid:4ee73322-68e8-423f-a720-737ef3693df4 INFO: XML extractor set to the following default namespace: http://pds.nasa.gov/pds4/pds/v03 INFO: [holdings/i943630r.raw] Begin processing. ERROR: [holdings/i943630r.raw] Premature end of file. INFO: [holdings/minimalImage.xml] Begin processing. INFO: [holdings/minimalImage.xml] line 42: Mapping reference type 'data_to_investigation' to 'investigation_ref'. INFO: [holdings/minimalImage.xml] line 53: Mapping reference type 'is_instrument_host' to 'instrument_host_ref'. INFO: [holdings/minimalImage.xml] line 62: Mapping reference type 'is_instrument' to 'instrument_ref'. INFO: [holdings/minimalImage.xml] line 72: Mapping reference type 'data_to_target' to 'target_ref'. INFO: [holdings/minimalImage.xml] line 83: Mapping reference type 'data_to_document' to 'document_ref'. INFO: [holdings/minimalImage.xml] line 87: Mapping reference type 'data_to_document' to 'document_ref'. INFO: [holdings/minimalImage.xml] line 91: Mapping reference type 'data_to_document' to 'document_ref'. INFO: [holdings/minimalImage.xml] line 95: Mapping reference type 'data_to_document' to 'document_ref'. INFO: [holdings/minimalImage.xml] line 99: Mapping reference type 'data_to_document' to 'document_ref'. INFO: [holdings/minimalImage.xml] Setting LIDVID-based association, 'urn:nasa:pds:TESTING:investigation.MARS_PATHFINDER::1.0', under slot name 'investigation_ref'. INFO: [holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:TESTING:instrument_host.MPFL', under slot name 'instrument_host_ref'. INFO: [holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:TESTING:instrument.IMP__MPFL', under slot name 'instrument_ref'. INFO: [holdings/minimalImage.xml] Setting LIDVID-based association, 'urn:nasa:pds:TESTING:target.MARS::1.0', under slot name 'target_ref'. INFO: [holdings/minimalImage.xml] Setting LIDVID-based association, 'urn:nasa:pds:TESTING:investigation.MARS_PATHFINDER::1.0', under slot name 'document_ref'. INFO: [holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:TESTING:instrument_host.MPFL', under slot name 'document_ref'. INFO: [holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:TESTING:instrument.IMP__MPFL', under slot name 'document_ref'. INFO: [holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:TESTING:target.MARS', under slot name 'document_ref'. INFO: [holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:node.IMG', under slot name 'document_ref'. SUCCESS: [holdings/minimalImage.xml] Successfully registered product: urn:nasa:pds:TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-V1.0::4.4 INFO: [holdings/minimalImage.xml] Product has the following GUID: urn:uuid:8c8de7ea-7d2e-4d65-aa60-7e35718ddac2 INFO: [holdings/minimalImage.xml] Capturing file information for minimalImage.xml INFO: [holdings/minimalImage.xml] Capturing file object metadata for i943630r.raw INFO: [holdings/minimalImage.xml] Found checksum in the product label for file object 'holdings/i943630r.raw': d220dac0d1fe312f3f3b9c824f6ac294 SUCCESS: [holdings/minimalImage.xml] Successfully registered product: urn:nasa:pds:TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-V1.0:minimalImage.xml::4.4 INFO: [holdings/minimalImage.xml] Product has the following GUID: urn:uuid:d36e3a52-792e-4718-ae2d-2430fcd9a396 SUCCESS: [holdings/minimalImage.xml] Successfully registered product: urn:nasa:pds:TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-V1.0:i943630r.raw::4.4 INFO: [holdings/minimalImage.xml] Product has the following GUID: urn:uuid:1375a95f-6426-47ea-8968-812b712c884c SUCCESS: [holdings/minimalImage.xml] Successfully registered association to urn:nasa:pds:TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-V1.0:minimalImage.xml::4.4 INFO: [holdings/minimalImage.xml] Association has the following GUID: urn:uuid:73d7e25f-ae82-4142-9697-51769e169dc5 SUCCESS: [holdings/minimalImage.xml] Successfully registered association to</p>
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urn:nasa:pds:TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-
2-EDR-V1.0:i943630r.raw::4.4
INFO: [holdings/minimalImage.xml] Association has the following GUID: urn:uuid:691a1449-eda0-42cf-
a3f9-0c70e1f0e008
Summary:
1 of 3 file(s) processed, 0 other file(s) skipped
1 error(s), 0 warning(s)
1 of 1 products registered.
2 of 2 ancillary products registered.
Product Types Registered:
1 Product_Observational
2 Product_File_Repository
2 of 2 associations registered.
End of Log

```

Step 3: three additional lines displayed

The screenshot shows the Registry Service web interface. The browser address bar displays 'localhost:8080/registry-ui/'. The interface includes a navigation menu with tabs for Products, Associations, Packages, Services, Events, Schemes, and Classification Nodes. Below the menu is a search area with fields for GUID, LID, Name, Object Type, and Status. The main content area displays a table titled 'Product Registry' with the following data:

Name	LID	Version Name	Object Type	Status
i943630r	urn:nasa:pds:TESTING:example.DPH.sampleF	2.0	Product_File_Repository	Submitted
i943630r	urn:nasa:pds:TESTING:example.DPH.sampleF	1.0	Product_File_Repository	Submitted
MARS PATHFINDER LANDER Experiment	urn:nasa:pds:TESTING:example.DPH.sampleF	2.0	Product_Observational	Submitted
minimalImage	urn:nasa:pds:TESTING:example.DPH.sampleF	1.0	Product_File_Repository	Submitted
MARS PATHFINDER LANDER Experiment	urn:nasa:pds:TESTING:example.DPH.sampleF	1.0	Product_Observational	Submitted
minimalImage	urn:nasa:pds:TESTING:example.DPH.sampleF	2.0	Product_File_Repository	Submitted

Step 4:

```

* About to connect() to localhost port 8080 (#0)
* Trying ::1...
* connected
* Connected to localhost (::1) port 8080 (#0)
> DELETE /registry/packages/urn:uuid:4ee73322-68e8-423f-a720-737ef3693df4/members HTTP/1.1
> User-Agent: curl/7.24.0 (x86_64-apple-darwin12.0) libcurl/7.24.0 OpenSSL/0.9.8r zlib/1.2.5
> Host: localhost:8080
> Accept: */*
< HTTP/1.1 200 OK
< Server: Apache-Coyote/1.1
< Content-Length: 0
< Date: Tue, 09 Apr 2013 00:30:46 GMT
* Connection #0 to host localhost left intact
* Closing connection #0

```

Step 5 shows registration of only the original version, just like AATESTME.3's step 3

The screenshot shows the Registry Service web interface with a banner for the Planetary Data System. The browser address bar displays 'localhost:8080/registry-ui/'. The interface includes a navigation menu with tabs for Products, Associations, Packages, Services, Events, Schemes, and Classification Nodes. Below the menu is a search area with fields for GUID, LID, Name, Object Type, and Status. The main content area displays a table titled 'Product Registry' with the following data:

Name	LID	Version Name	Object Type	Status
i943630r	urn:nasa:pds:TESTING:example.DPH.sampleF	1.0	Product_File_Repository	Submitted
minimalImage	urn:nasa:pds:TESTING:example.DPH.sampleF	1.0	Product_File_Repository	Submitted
MARS PATHFINDER LANDER Experiment	urn:nasa:pds:TESTING:example.DPH.sampleF	1.0	Product_Observational	Submitted

	<p>Step 6: The output in deleting each of the 3 products includes "HTTP/1.1 200 OK".</p> <pre> * About to connect() to localhost port 8080 (#0) * Trying ::1... * connected * Connected to localhost (::1) port 8080 (#0) > DELETE /registry/extrinsics/urn:uuid:58ae845d-5c27-4dee-859f-84de310f0595 HTTP/1.1 > User-Agent: curl/7.24.0 (x86_64-apple-darwin12.0) libcurl/7.24.0 OpenSSL/0.9.8r zlib/1.2.5 > Host: localhost:8080 > Accept: */* < HTTP/1.1 200 OK < Server: Apache-Coyote/1.1 < Content-Type: application/xml < Content-Length: 0 < Date: Tue, 09 Apr 2013 00:35:42 GMT * Connection #0 to host localhost left intact * Closing connection #0 </pre> <p>Step 7 shows no records with LID beginning with "TESTING". If database was initially clean, "There is no data to display"</p>
Comments	Results met test successful criteria
Date of Testing	2013.04.08
Test Personnel	Richard Chen

Test Case ID	AATESTME.8
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.
Test Steps	<ol style="list-style-type: none"> 1. Clean database as described in RESETREGISTRY in Section 3.1 2. As in AATESTME.3's step 2: harvest <i>testDir</i>/holdings -c harvest-policy-master.xml 3. Step 2's output includes the GUID of the associations between the data product and 1) the label and 2) the data file . Replace <i>guid</i> below with the GUIDs: http://localhost:8080/registry/associations/guid 4. Delete one of the associations: curl -X DELETE -v http://localhost:8080/registry/associations/guid 5. Repeat step 3. 6. Another way to delete an association is to delete its source object. Delete the product via its GUID: curl -v -X DELETE http://localhost:8080/registry/extrinsics/guid 7. Repeat step 3. Both associations should be gone.
Test Results	<p>Step 2:</p> <pre> PDS Harvest Tool Log Version Version 1.4.0 Time Mon, Apr 08 2013 at 10:06:03 PM Target(s) [holdings] Severity Level INFO Registry Location http://localhost:8080/registry Registry Package Name The standard harvest policy file, I think Registration Package GUID urn:uuid:ace70f06-db91-4287-8c77-7892c040c4b8 INFO: XML extractor set to the following default namespace: http://pds.nasa.gov/pds4/pds/v03 INFO: [holdings/i943630r.raw] Begin processing. ERROR: [holdings/i943630r.raw] Premature end of file. INFO: [holdings/minimalImage.xml] Begin processing. INFO: [holdings/minimalImage.xml] line 42: Mapping reference type 'data_to_investigation' to 'investigation_ref'. INFO: [holdings/minimalImage.xml] line 53: Mapping reference type 'is_instrument_host' to 'instrument_host_ref'. INFO: [holdings/minimalImage.xml] line 62: Mapping reference type 'is_instrument' to 'instrument_ref'. INFO: [holdings/minimalImage.xml] line 72: Mapping reference type 'data_to_target' to 'target_ref'. </pre>

INFO: [holdings/minimalImage.xml] line 83: Mapping reference type 'data_to_document' to 'document_ref'.

INFO: [holdings/minimalImage.xml] line 87: Mapping reference type 'data_to_document' to 'document_ref'.

INFO: [holdings/minimalImage.xml] line 91: Mapping reference type 'data_to_document' to 'document_ref'.

INFO: [holdings/minimalImage.xml] line 95: Mapping reference type 'data_to_document' to 'document_ref'.

INFO: [holdings/minimalImage.xml] line 99: Mapping reference type 'data_to_document' to 'document_ref'.

INFO: [holdings/minimalImage.xml] Setting LIDVID-based association, 'urn:nasa:pds:TESTING:investigation.MARS_PATHFINDER:1.0', under slot name 'investigation_ref'.

INFO: [holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:TESTING:instrument_host.MPFL', under slot name 'instrument_host_ref'.

INFO: [holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:TESTING:instrument.IMP__MPFL', under slot name 'instrument_ref'.

INFO: [holdings/minimalImage.xml] Setting LIDVID-based association, 'urn:nasa:pds:TESTING:target.MARS:1.0', under slot name 'target_ref'.

INFO: [holdings/minimalImage.xml] Setting LIDVID-based association, 'urn:nasa:pds:TESTING:investigation.MARS_PATHFINDER:1.0', under slot name 'document_ref'.

INFO: [holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:TESTING:instrument_host.MPFL', under slot name 'document_ref'.

INFO: [holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:TESTING:instrument.IMP__MPFL', under slot name 'document_ref'.

INFO: [holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:TESTING:target.MARS', under slot name 'document_ref'.

INFO: [holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:node.IMG', under slot name 'document_ref'.

SUCCESS: [holdings/minimalImage.xml] Successfully registered product:
urn:nasa:pds:TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-V1.0:4.4

INFO: [holdings/minimalImage.xml] Product has the following GUID: [urn:uuid:1a72e84c-9bb9-4047-951c-2b4bb2194ba9](#)

INFO: [holdings/minimalImage.xml] Capturing file information for minimalImage.xml

INFO: [holdings/minimalImage.xml] Capturing file object metadata for i943630r.raw

INFO: [holdings/minimalImage.xml] Found checksum in the product label for file object 'holdings/i943630r.raw': d220dac0d1fe312f3f3b9c824f6ac294

SUCCESS: [holdings/minimalImage.xml] Successfully registered product:
urn:nasa:pds:TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-V1.0:minimalImage.xml:4.4

INFO: [holdings/minimalImage.xml] Product has the following GUID: urn:uuid:22eae4e9-f400-4331-a21b-bf914ce874db

SUCCESS: [holdings/minimalImage.xml] Successfully registered product:
urn:nasa:pds:TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-V1.0:i943630r.raw:4.4

INFO: [holdings/minimalImage.xml] Product has the following GUID: urn:uuid:c2b0eda1-be76-4ef2-b8b5-3db1c2b21c54

SUCCESS: [holdings/minimalImage.xml] Successfully registered association to
urn:nasa:pds:TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-V1.0:minimalImage.xml:4.4

INFO: [holdings/minimalImage.xml] Association has the following GUID: [urn:uuid:98efbd9f-11a4-4c52-bbe0-fc3454fe82ca](#)

SUCCESS: [holdings/minimalImage.xml] Successfully registered association to
urn:nasa:pds:TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-V1.0:i943630r.raw:4.4

INFO: [holdings/minimalImage.xml] Association has the following GUID: [urn:uuid:5bf51e11-9337-4490-b9ae-b10f1037d694](#)

Summary:
1 of 3 file(s) processed, 0 other file(s) skipped
1 error(s), 0 warning(s)
1 of 1 products registered.
2 of 2 ancillary products registered.
Product Types Registered:
1 Product_Observational
2 Product_File_Repository
2 of 2 associations registered.
End of Log

Step 3:

```

- <ns2:association associationType="file_ref" targetObject="urn:uuid:22eae4c9-f400-4331-a21b-bf914ce874db"
  sourceObject="urn:uuid:1a72e84c-9bb9-4047-951c-2b4bb2194ba9" versionName="1.0" status="Submitted"
  objectType="Association" lid="urn:uuid:edeb0fac-f6f6-421c-b88d-f1360e88f225" home="http://localhost:8080
  /registry" guid="urn:uuid:98efbd9f-11a4-4c52-bbe0-fc3454fe82ca">
- <ns2:slot name="verified" id="425">
  <ns2:value>true</ns2:value>
</ns2:slot>
</ns2:association>

```

```

- <ns2:association associationType="file_ref" targetObject="urn:uuid:22eae4c9-f400-4331-a21b-bf914ce874db"
  sourceObject="urn:uuid:1a72e84c-9bb9-4047-951c-2b4bb2194ba9" versionName="1.0" status="Submitted"
  objectType="Association" lid="urn:uuid:edeb0fac-f6f6-421c-b88d-f1360e88f225" home="http://localhost:8080
  /registry" guid="urn:uuid:98efbd9f-11a4-4c52-bbe0-fc3454fe82ca">
- <ns2:slot name="verified" id="425">
  <ns2:value>true</ns2:value>
</ns2:slot>
</ns2:association>

```

Step 4:

```

* About to connect() to localhost port 8080 (#0)
* Trying ::1...
* connected
* Connected to localhost (::1) port 8080 (#0)
> DELETE /registry/associations/urn:uuid:98efbd9f-11a4-4c52-bbe0-fc3454fe82ca HTTP/1.1
> User-Agent: curl/7.24.0 (x86_64-apple-darwin12.0) libcurl/7.24.0 OpenSSL/0.9.8r zlib/1.2.5
> Host: localhost:8080
> Accept: */*
< HTTP/1.1 200 OK
< Server: Apache-Coyote/1.1
< Content-Length: 0
< Date: Tue, 09 Apr 2013 05:23:51 GMT
* Connection #0 to host localhost left intact
* Closing connection #0

```

Step 5: the untouched association is the same as step 3 above. The deleted one:

```

XML Parsing Error: syntax error
Location: http://localhost:8080/registry/associations/urn:uuid:98efbd9f-11a4-4c52-bbe0-fc3454fe82ca
Line Number 1, Column 1:

Object not found urn:uuid:98efbd9f-11a4-4c52-bbe0-fc3454fe82ca
^


```

Step 6:

```

* About to connect() to localhost port 8080 (#0)
* Trying ::1...
* connected
* Connected to localhost (::1) port 8080 (#0)
> DELETE /registry/extrinsics/urn:uuid:1a72e84c-9bb9-4047-951c-2b4bb2194ba9 HTTP/1.1
> User-Agent: curl/7.24.0 (x86_64-apple-darwin12.0) libcurl/7.24.0 OpenSSL/0.9.8r zlib/1.2.5
> Host: localhost:8080
> Accept: */*
< HTTP/1.1 200 OK
< Server: Apache-Coyote/1.1
< Content-Type: application/xml
< Content-Length: 0
< Date: Tue, 09 Apr 2013 05:32:04 GMT
* Connection #0 to host localhost left intact
* Closing connection #0

```

	<p>Step 7: the other association is now gone.</p> 
Comments	Results met test successful criteria
Date of Testing	2013.04.08
Test Personnel	Richard Chen

Test Case ID	CTLG.1
Description	Compare a catalog submission, both file to file and directory to directory
Test Steps	<ol style="list-style-type: none"> 1. catalog -mcompare testCatalog/CORPWS_0164 testCatalog/CORPWS_0180 2. catalog -mcompare testCatalog/CORPWS_0164/RAWDS.CAT testCatalog/CORPWSrawX.CAT
Test Results	<p>Step 1:</p> <p>PDS Catalog Ingest Tool Report Configuration: Version Version 1.5.0 Date Sun, Apr 07 2013 at 01:01:27 AM Parameters: Mode compare Target(s) Source = file: testDir/testCatalog/CORPWS_0164/ Target = file: testDir/testCatalog/CORPWS_0180/ Directory Recursion true Severity Level WARNING Compare Details: SAME: file: testDir/testCatalog/CORPWS_0180/INSTHOST.CAT SAME: file: testDir/testCatalog/CORPWS_0180/KEYDS.CAT SAME: file: testDir/testCatalog/CORPWS_0180/LRFULLDS.CAT SAME: file: testDir/testCatalog/CORPWS_0180/MISSION.CAT SAME: file: testDir/testCatalog/CORPWS_0180/PERSON.CAT SAME: file: testDir/testCatalog/CORPWS_0180/PROJREF.CAT SAME: file: testDir/testCatalog/CORPWS_0180/RAWDS.CAT SAME: file: testDir/testCatalog/CORPWS_0180/REF.CAT SAME: file: testDir/testCatalog/CORPWS_0180/RPWSINST.CAT DIFFERENT: file: testDir/testCatalog/CORPWS_0180/VOLDESC.CAT line 23: Element "DATA_SET_ID" has different value than source. Source: line 23 of file: testDir/testCatalog/CORPWS_0164/VOLDESC.CAT 23c23 < CO-V/E/J/S/SS-RPWS-4-SUMM-KEY60S-V1.0 ---- > {CO-V/E/J/S/SS-RPWS-4-SUMM-KEY60S-V1.0, CO-V/E/J/S/SS-RPWS-2-REFDR-ALL-V1.0, CO-V/E/J/S/SS-RPWS-3-RDR-LRFULL-V1.0, CO-V/E/J/S/SS-RPWS-2-REFDR-WBRFULL-V1.0, CO-V/E/J/S/SS-RPWS-2-REFDR-WFRFULL-V1.0} line 16: Element "DESCRIPTION" has different value than source. Source: line 16 of file: testDir/testCatalog/CORPWS_0164/VOLDESC.CAT 19c19 < (SCET) dates 2011-05-27 (147) through 2011-06-12 (163). ---- > (SCET) dates 2012-11-26 (331) through 2012-12-23 (358). line 9: Element "VOLUME_NAME" has different value than source. Source: line 9 of file: testDir/testCatalog/CORPWS_0164/VOLDESC.CAT</p>

```

10c10
< VOLUME 164: CASSINI RADIO AND PLASMA WAVE STANDARD PRODUCTS
----
> VOLUME 180: CASSINI RADIO AND PLASMA WAVE STANDARD PRODUCTS
line 15: Element "PUBLICATION_DATE" has different value than source.
Source: line 15 of file: testDir/testCatalog/CORPWS_0164/VOLDESC.CAT
15c15
< 2011-12-22
----
> 2013-03-28
line 11: Element "VOLUME_ID" has different value than source.
Source: line 11 of file: testDir/testCatalog/CORPWS_0164/VOLDESC.CAT
11c11
< CORPWS_0164
----
> CORPWS_0180
line 74: Element "DATA_SET_ID" has different value than source.
Source: line 70 of file: testDir/testCatalog/CORPWS_0164/VOLDESC.CAT
70c74
< CO-V/E/J/S/SS-RPWS-4-SUMM-KEY60S-V1.0
----
> {CO-V/E/J/S/SS-RPWS-4-SUMM-KEY60S-V1.0, CO-V/E/J/S/SS-RPWS-2-REFDR-ALL-V1.0, CO-
V/E/J/S/SS-RPWS-3-RDR-LRFULL-V1.0, CO-V/E/J/S/SS-RPWS-2-REFDR-WBRFULL-V1.0, CO-
V/E/J/S/SS-RPWS-2-REFDR-WFRFULL-V1.0}
line 80: Pointer "DATA_SET_CATALOG" has different value than source.
Source: line 71 of file: testDir/testCatalog/CORPWS_0164/VOLDESC.CAT
71c80
< KEYDS.CAT
----
> {KEYDS.CAT, RAWDS.CAT, LRFULLDS.CAT, WBFULLDS.CAT, WFFULLDS.CAT}
line 86: Pointer "REFERENCE_CATALOG" has different value than source.
Source: line 72 of file: testDir/testCatalog/CORPWS_0164/VOLDESC.CAT
72c86
< {REF.CAT}
----
> {REF.CAT, PROJREF.CAT}
SAME: file: testDir/testCatalog/CORPWS_0180/WBFULLDS.CAT
SAME: file: testDir/testCatalog/CORPWS_0180/WFFULLDS.CAT
Summary:
12 of 12 validated, 0 skipped
11 of 12 passed
End of Report

```

Step 2:

```

PDS Catalog Ingest Tool Report
Configuration:
Version      Version 1.5.0
Date         Sun, Apr 07 2013 at 01:03:40 AM
Parameters:
Mode         compare
Target(s)
Source = file: testDir/testCatalog/CORPWS_0164/RAWDS.CAT
Target = file: testDir/testCatalog/CORPWSrawX.CAT
Directory Recursion true
Severity Level WARNING
Compare Details:
DIFFERENT: file: testDir/testCatalog/CORPWSrawX.CAT
line 56: Element "DATA_SET_DESC" has different value than source.
Source: line 56 of file: testDir/testCatalog/CORPWS_0164/RAWDS.CAT
126,130c126,130
< kernels can be used with the SPICE toolkit to convert from the
< spacecraft frame to virtually any frame which may be of use in
< analyzing these data. However, for many purposes, the wave
< amplitudes are extremely useful and may be entirely adequate with no
< coordinate transformations at all.
----
> kernels EXTRAWORDHERE can be used with the SPICE toolkit to convert
> from the spacecraft frame to virtually any frame which may be of
> use in analyzing these data. However, for many purposes, the
> wave amplitudes are extremely useful and may be entirely adequate
> with no coordinate transformations at all.
Summary:
1 of 1 validated, 0 skipped

```

	0 of 1 passed End of Report
Comments	Results met test successful criteria. One suggestion was created in JIRA for consideration: https://oodt.jpl.nasa.gov/jira/browse/PDS-161 to better show only the different token plus a few tokens around it. (This suggestion has been resolved.)
Date of Testing	2013.04.07
Test Personnel	Richard Chen

Test Case ID	CTLG.2
Description	Validate a catalog submission.
Test Steps	catalog -mvalidate -d testCatalog/pdsdd.full -t testCatalog/LRO_diviner/
Test Results	<p>PDS Catalog Ingest Tool Report Configuration: Version Version 1.5.0 Date Thu, Apr 04 2013 at 05:16:05 PM Parameters: Mode validate Target file: testDir/testCatalog/LRO_diviner/ Directory Recursion true Dictionary File(s) [testCatalog/pdsdd.full] Severity Level WARNING Aliasing Enabled false Validation Details: PASS: file: testDir/testCatalog/LRO_diviner/dsmap.cat PASS: file: testDir/testCatalog/LRO_diviner/dsmap_polar.cat PASS: file: testDir/testCatalog/LRO_diviner/gdrds.cat PASS: file: testDir/testCatalog/LRO_diviner/inst.cat PASS: file: testDir/testCatalog/LRO_diviner/insthost.cat PASS: file: testDir/testCatalog/LRO_diviner/mission.cat PASS: file: testDir/testCatalog/LRO_diviner/person.cat PASS: file: testDir/testCatalog/LRO_diviner/prpds.cat PASS: file: testDir/testCatalog/LRO_diviner/rdrds.cat PASS: file: testDir/testCatalog/LRO_diviner/ref.cat FAIL: file: testDir/testCatalog/LRO_diviner/voldesc.cat Begin Fragment: file: testDir/testCatalog/LRO_diviner/REF.CAT WARNING The label fragment, "REF.CAT", should not contain a PDS_VERSION_ID. End Fragment: file: testDir/testCatalog/LRO_diviner/REF.CAT Begin Fragment: file: testDir/testCatalog/LRO_diviner/PERSON.CAT WARNING The label fragment, "PERSON.CAT", should not contain a PDS_VERSION_ID. End Fragment: file: testDir/testCatalog/LRO_diviner/PERSON.CAT Begin Fragment: file: testDir/testCatalog/LRO_diviner/INSTHOST.CAT WARNING The label fragment, "INSTHOST.CAT", should not contain a PDS_VERSION_ID. End Fragment: file: testDir/testCatalog/LRO_diviner/INSTHOST.CAT Begin Fragment: file: testDir/testCatalog/LRO_diviner/MISSION.CAT WARNING The label fragment, "MISSION.CAT", should not contain a PDS_VERSION_ID. ERROR line 40: Found a reference, "SAYLOR2006A", which is not defined in a REFERENCE_KEY_ID within the label. ERROR line 40: Found a reference, "SAYLOR2006B", which is not defined in a REFERENCE_KEY_ID within the label. End Fragment: file: testDir/testCatalog/LRO_diviner/MISSION.CAT Begin Fragment: file: testDir/testCatalog/LRO_diviner/INST.CAT WARNING The label fragment, "INST.CAT", should not contain a PDS_VERSION_ID. End Fragment: file: testDir/testCatalog/LRO_diviner/INST.CAT Begin Fragment: file: testDir/testCatalog/LRO_diviner/GDRDS.CAT WARNING The label fragment, "GDRDS.CAT", should not contain a PDS_VERSION_ID. End Fragment: file: testDir/testCatalog/LRO_diviner/GDRDS.CAT Referential Integrity Details: FAIL: Reference Parent File(s): [ref.cat] Begin checking children dsmap_polar.cat: "REFERENCE_KEY_ID = SEIDELMANNETAL2002" is not found in a(n) "ref.cat".</p>

	<p>dsmap_polar.cat: "REFERENCE_KEY_ID = SNYDER1987" is not found in a(n) "ref.cat". dsmap.cat: "REFERENCE_KEY_ID = SEIDELMANNETAL2002" is not found in a(n) "ref.cat". dsmap.cat: "REFERENCE_KEY_ID = SNYDER1987" is not found in a(n) "ref.cat".</p> <p>End checking children PASS: Personnel Parent File(s): [person.cat] Begin checking children End checking children</p> <p>PASS: Data Set Parent File(s): [gdrds.cat, prpds.cat, rdrds.cat] Begin checking children End checking children</p> <p>PASS: Instrument Host Parent File(s): [insthost.cat] Begin checking children End checking children</p> <p>PASS: Mission Parent File(s): [mission.cat] Begin checking children End checking children</p> <p>PASS: Instrument Parent File(s): [inst.cat] Begin checking children End checking children</p> <p>New Standard Values: Referential Integrity Summary: 6 of 6 referential integrity check(s) made, 0 skipped 5 of 6 passed New Standard Values Summary: 0 new standard value(s) found Summary: 11 of 11 validated, 0 skipped 10 of 11 passed End of Report</p>
Comments	<p>Results met test successful criteria.</p> <p>Note: When validating voldesc.cat, catalog -mvalidate reports that file DATASET.CAT, "should not contain a PDS_VERSION_ID". This is a known suggestion not to report such.</p>
Date of Testing	2013.04.04
Test Personnel	Richard Chen

Test Case ID	CTLG.3
Description	Ingest a catalog submission into the registry service
Test Steps	<p>The catalog ingest requires the registry, transport, and storage services be configured together, which is likely too complex for local testing. So before testing:</p> <ul style="list-style-type: none"> • The registry resides at http://localhost:8080 (edit script "catalog" to alter) • The administrator of the registry provides: <ul style="list-style-type: none"> ○ a keystore (in this example, the file is /somewhere/keystore) ○ a keystore password (e.g. hellopds) ○ URL for the registry (https://potato.registry.jpl.nasa.gov) ○ URL for the storage service (http://potato.jpl.nasa.gov:9100) ○ URL for the transport serv (http://potato.jpl.nasa.gov:80/cas-product) ○ username/password for the security service (rchen/new4rchen) • The keystore has been copied/moved to /somewhere/keystore • In the local script catalog (or catalog.bat), the java command has parameters <ul style="list-style-type: none"> ○ -Dpds.registry="https://potato.registry.jpl.nasa.gov/registry" ○ -Dpds.security.keystore="/somewhere/keystore" • To simplify the command-line, create a configuration file named config:

	<pre> citol.mode = ingest citol.user = rchen citol.pass = new4rchen citol.serverUrl = http://potato.jpl.nasa.gov:9100 citol.transportUrl = http://potato.jpl.nasa.gov:9000 citol.keypass = pdscat citol.verbose = 1 </pre> <ol style="list-style-type: none"> 1. catalog -ctestCatalog/config -t testCatalog/CORPWS_0164/ -r ctlg1.out 2. In a browser: http://localhost:8080/registry-ui to see registrations 3. catalog -ctestCatalog/config -t testCatalog/CORPWS_0180/ -r ctlg2.out 4. In a browser: http://localhost:8080/registry-ui. Click "Name" to sort 5. catalog -ctestCatalog/config -t testCatalog/PPIREF/ -r ctlg3.out catalog -ctestCatalog/config -t testCatalog/PPIREF/ppiref.cat -r ctlg3.out 6. catalog -ctestCatalog/config -t testCatalog/MPC_review/ -r ctlg4.out 7. catalog -ctestCatalog/config -t testCatalog/LRO_diviner/ -r ctlg6.out 8. catalog -t testCatalog/CORPWS_0180/ -r ctlg1.out
Test Results	<p>Step 1: stderr (on the command line) says:</p> <pre> Apr 7, 2013 1:44:43 AM org.apache.oodt.cas.filemgr.datatransfer.RemoteDataTransferFactory <init> INFO: RemoteDataTransfer enabled: using chunk size: [1024] Apr 7, 2013 1:44:44 AM org.apache.oodt.cas.filemgr.datatransfer.RemoteDataTransferer setFileManagerUrl INFO: Remote Data Transfer to: [http://potato.jpl.nasa.gov:9100] enabled </pre> <p>while ctlg1.out:</p> <pre> PDS Catalog Ingest Tool Report Configuration: Version Version 1.5.0 Date Sun, Apr 07 2013 at 01:44:40 AM Parameters: Mode ingest Target file: testDir/testCatalog/CORPWS_0164/ Directory Recursion true Severity Level INFO Report File ctlg1.out Ingest Details: PASS: file: testDir/testCatalog/CORPWS_0164/INSTHOST.CAT INFO: Successfully registered a product. LIDVID - urn:nasa:pds:context_pds3:instrument_host:instrument_host.CO:1.0 INFO: Product GUID - urn:uuid:90269f94-8a11-4d28-86c9-ff66afda2518 INFO: Successfully ingested a catalog file to the storage service. productID - 66b95e84-9f5f-11e2-92e5-5b9a3f9b4be2 INFO: Successfully ingested a file object. GUID - urn:uuid:ce17b35b-381d-40dc-8a12-5e8992d14d4e PASS: file: testDir/testCatalog/CORPWS_0164/KEYDS.CAT INFO: Successfully registered a product. LIDVID - urn:nasa:pds:context_pds3:data_set:data_set.CO-V-E-J-S-SS-RPWS-4-SUMM-KEY605-V1.0:1.0 INFO: Product GUID - urn:uuid:a0027b63-89d8-48a9-af7e-3bc742f28db1 INFO: Successfully ingested a catalog file to the storage service. productID - 849fa2b5-9f5f-11e2-92e5-5b9a3f9b4be2 INFO: Successfully ingested a file object. GUID - urn:uuid:c835c80c-72c1-411a-8517-1656627ddb94 PASS: file: testDir/testCatalog/CORPWS_0164/LRFULLDS.CAT INFO: Successfully registered a product. LIDVID - urn:nasa:pds:context_pds3:data_set:data_set.CO-V-E-J-S-SS-RPWS-3-RDR-LRFULL-V1.0:1.0 INFO: Product GUID - urn:uuid:a36d74b0-5461-4f0c-b9fe-aa48344df2d9 INFO: Successfully ingested a catalog file to the storage service. productID - 95aabbd6-9f5f-11e2-92e5-5b9a3f9b4be2 INFO: Successfully ingested a file object. GUID - urn:uuid:7ffb2be7-adf1-4595-a14e-2b9b41fc1d7e PASS: file: testDir/testCatalog/CORPWS_0164/MISSION.CAT INFO: Successfully registered a product. LIDVID - urn:nasa:pds:context_pds3:investigation:mission.CASSINI-HUYGENS:1.0 INFO: Product GUID - urn:uuid:a1eedbc0-c223-4986-b9f2-720de128e917 INFO: Successfully ingested a catalog file to the storage service. productID - a8345ea7-9f5f-11e2-92e5-5b9a3f9b4be2 INFO: Successfully ingested a file object. GUID - urn:uuid:d55e4102-0a2a-4ca2-b0a0-c136ee373914 PASS: file: testDir/testCatalog/CORPWS_0164/PERSON.CAT WARNING: This file is not required to ingest into the registry service. </pre>

INFO: Successfully ingested a catalog file to the storage service. productID - fa730ea8-9f5f-11e2-92e5-5b9a3f9b4be2

INFO: Successfully ingested a file object. GUID - urn:uuid:9a6b2b4d-cfee-4d32-b950-f647d8281f34

PASS: file: *testDir/testCatalog/CORPWS_0164/PROJREF.CAT*

WARNING: This file is not required to ingest into the registry service.

INFO: Successfully ingested a catalog file to the storage service. productID - 03008a79-9f60-11e2-92e5-5b9a3f9b4be2

INFO: Successfully ingested a file object. GUID - urn:uuid:8ba445a9-cc3d-4c25-b64a-d592cd050888

PASS: file: *testDir/testCatalog/CORPWS_0164/RAWDS.CAT*

INFO: Successfully registered a product. LIDVID - urn:nasa:pds:context_pds3:data_set:data_set.CO-V-E-J-S-SS-RPWS-2-REFDR-ALL-V1.0::1.0

INFO: Product GUID - urn:uuid:6e2201b4-f700-4bef-b1b9-86318a422c29

INFO: Successfully ingested a catalog file to the storage service. productID - 0732e98a-9f60-11e2-92e5-5b9a3f9b4be2

INFO: Successfully ingested a file object. GUID - urn:uuid:5b97b1e9-ac49-43a1-a73c-85d92a338446

PASS: file: *testDir/testCatalog/CORPWS_0164/REF.CAT*

WARNING: This file is not required to ingest into the registry service.

INFO: Successfully ingested a catalog file to the storage service. productID - 17811b4b-9f60-11e2-92e5-5b9a3f9b4be2

INFO: Successfully ingested a file object. GUID - urn:uuid:45be64b9-7e2a-4c84-b543-6cf31c098251

PASS: file: *testDir/testCatalog/CORPWS_0164/RPWSINST.CAT*

INFO: Successfully registered a product. LIDVID - urn:nasa:pds:context_pds3:instrument:instrument.RPWS__CO::1.0

INFO: Product GUID - urn:uuid:0fab8a92-d630-40a9-a9fd-95a3b7e3f1be

INFO: Successfully ingested a catalog file to the storage service. productID - 2749542c-9f60-11e2-92e5-5b9a3f9b4be2

INFO: Successfully ingested a file object. GUID - urn:uuid:2ddb1dc1-ea9d-444e-9794-f7cf652f40d9

PASS: file: *testDir/testCatalog/CORPWS_0164/VOLDESC.CAT*

INFO: Successfully registered a product. LIDVID - urn:nasa:pds:context_pds3:volume:volume.CORPWS_0164__USA_NASA_PDS_CORPWS_0XXX::1.0

INFO: Product GUID - urn:uuid:937f03db-79a8-41ba-980a-2d4a457171b9

INFO: Successfully ingested a catalog file to the storage service. productID - 35bea73d-9f60-11e2-92e5-5b9a3f9b4be2

INFO: Successfully ingested a file object. GUID - urn:uuid:e91eadaa-0896-4225-b77c-73cf1639e4f5

PASS: file: *testDir/testCatalog/CORPWS_0164/WBFULLDS.CAT*

INFO: Successfully registered a product. LIDVID - urn:nasa:pds:context_pds3:data_set:data_set.CO-V-E-J-S-SS-RPWS-2-REFDR-WBRFULL-V1.0::1.0

INFO: Product GUID - urn:uuid:7bee9e0f-bc4e-45e8-985c-63193649b4eb

INFO: Successfully ingested a catalog file to the storage service. productID - 3f36d12e-9f60-11e2-92e5-5b9a3f9b4be2

INFO: Successfully ingested a file object. GUID - urn:uuid:0ba1aa02-07da-4a1b-b2b5-ff58e1be2eec

PASS: file: *testDir/testCatalog/CORPWS_0164/WFFULLDS.CAT*

INFO: Successfully registered a product. LIDVID - urn:nasa:pds:context_pds3:data_set:data_set.CO-V-E-J-S-SS-RPWS-2-REFDR-WFRFULL-V1.0::1.0

INFO: Product GUID - urn:uuid:d8785903-f5c8-454c-88e1-101f3d87e624

INFO: Successfully ingested a catalog file to the storage service. productID - 527740df-9f60-11e2-92e5-5b9a3f9b4be2

INFO: Successfully ingested a file object. GUID - urn:uuid:ff0d5d13-dbc5-48ee-8f82-0a4d7cbfa5f0

Summary:
 12 of 12 file(s) ingested, 0 skipped
 Number of successful file object ingestion: 12
 Number of successful storage service ingestion: 12
 Number of successful registry ingestion: 9
 Name of the registry package: Catalog-Package_CORPWS_0164_20130407014444
 End of Report

Step 2:

Registry Service

localhost:8080/registry-ui/

Registry Service

Product Registry

<input type="checkbox"/>	Name	LID	Version Nam	Object Type	Status
<input type="checkbox"/>	WBFULLDS	urn:nasa:pds:context_pds3:data_set:data_s	1.0	Product_File_Repository	Submitted
<input type="checkbox"/>	RADIO AND PLASMA WAVE SCIENCE fo	urn:nasa:pds:context_pds3:instrument:instr	1.0	Product_Instrument_PDS3	Submitted
<input type="checkbox"/>	RPWSINST	urn:nasa:pds:context_pds3:instrument:instr	1.0	Product_File_Repository	Submitted
<input type="checkbox"/>	REF	urn:nasa:pds:context_pds3:data_set:data_s	1.0	Product_File_Repository	Submitted
<input type="checkbox"/>	RAWDS	urn:nasa:pds:context_pds3:data_set:data_s	1.0	Product_File_Repository	Submitted
<input type="checkbox"/>	CASSINI V/E/J/S/SS RPWS RAW COMPL	urn:nasa:pds:context_pds3:data_set:data_s	1.0	Product_Data_Set_PDS3	Submitted
<input type="checkbox"/>	CASSINI V/E/J/S/SS RPWS EDITED WIDE	urn:nasa:pds:context_pds3:data_set:data_s	1.0	Product_Data_Set_PDS3	Submitted
<input type="checkbox"/>	LRFULLDS	urn:nasa:pds:context_pds3:data_set:data_s	1.0	Product_File_Repository	Submitted
<input type="checkbox"/>	PROJREF	urn:nasa:pds:context_pds3:investigation:mi	1.0	Product_File_Repository	Submitted
<input type="checkbox"/>	CASSINI ORBITER	urn:nasa:pds:context_pds3:instrument_hos	1.0	Product_Instrument_Host_PDS3	Submitted
<input type="checkbox"/>	CORPWS_0164	urn:nasa:pds:context_pds3:volume:volume	1.0	Product_Volume_PDS3	Submitted
<input type="checkbox"/>	PERSON	urn:nasa:pds:context_pds3:investigation:mi	1.0	Product_File_Repository	Submitted
<input type="checkbox"/>	CASSINI V/E/J/S/SS RPWS SUMMARY KI	urn:nasa:pds:context_pds3:data_set:data_s	1.0	Product_Data_Set_PDS3	Submitted
<input type="checkbox"/>	CASSINI-HUYGENS	urn:nasa:pds:context_pds3:investigation:mi	1.0	Product_Mission_PDS3	Submitted
<input type="checkbox"/>	CASSINI V/E/J/S/SS RPWS CALIBRATED	urn:nasa:pds:context_pds3:data_set:data_s	1.0	Product_Data_Set_PDS3	Submitted
<input type="checkbox"/>	KEYDS	urn:nasa:pds:context_pds3:data_set:data_s	1.0	Product_File_Repository	Submitted
<input type="checkbox"/>	INSTHOST	urn:nasa:pds:context_pds3:instrument_hos	1.0	Product_File_Repository	Submitted
<input type="checkbox"/>	MISSION	urn:nasa:pds:context_pds3:investigation:mi	1.0	Product_File_Repository	Submitted
<input type="checkbox"/>	CASSINI V/E/J/S/SS RPWS EDITED WAV	urn:nasa:pds:context_pds3:data_set:data_s	1.0	Product_Data_Set_PDS3	Submitted
<input type="checkbox"/>	VOLDESC	urn:nasa:pds:context_pds3:volume:volume	1.0	Product_File_Repository	Submitted

Name LID Version Nam Object Type Status

1 of 2 Total Records: 21 Show: 20 records

Step 3: ctlg1.out and ctlg2.out are essentially the same

Step 4:

Registry Service

localhost:8080/registry-ui/

Registry Service

Product Registry

<input type="checkbox"/>	Name	LID	Version Nam	Object Type	Status
<input type="checkbox"/>	WFFULLDS	urn:nasa:pds:context_pds3:data_set:data_s	2.0	Product_File_Repository	Submitted
<input type="checkbox"/>	WFFULLDS	urn:nasa:pds:context_pds3:data_set:data_s	1.0	Product_File_Repository	Submitted
<input type="checkbox"/>	WBFULLDS	urn:nasa:pds:context_pds3:data_set:data_s	2.0	Product_File_Repository	Submitted
<input type="checkbox"/>	WBFULLDS	urn:nasa:pds:context_pds3:data_set:data_s	1.0	Product_File_Repository	Submitted
<input type="checkbox"/>	VOLDESC	urn:nasa:pds:context_pds3:volume:volume	1.0	Product_File_Repository	Submitted
<input type="checkbox"/>	VOLDESC	urn:nasa:pds:context_pds3:volume:volume	1.0	Product_File_Repository	Submitted
<input type="checkbox"/>	RPWSINST	urn:nasa:pds:context_pds3:instrument:instr	2.0	Product_File_Repository	Submitted
<input type="checkbox"/>	RPWSINST	urn:nasa:pds:context_pds3:instrument:instr	1.0	Product_File_Repository	Submitted
<input type="checkbox"/>	REF	urn:nasa:pds:context_pds3:data_set:data_s	2.0	Product_File_Repository	Submitted
<input type="checkbox"/>	REF	urn:nasa:pds:context_pds3:data_set:data_s	1.0	Product_File_Repository	Submitted
<input type="checkbox"/>	RAWDS	urn:nasa:pds:context_pds3:data_set:data_s	2.0	Product_File_Repository	Submitted
<input type="checkbox"/>	RAWDS	urn:nasa:pds:context_pds3:data_set:data_s	1.0	Product_File_Repository	Submitted
<input type="checkbox"/>	RADIO AND PLASMA WAVE SCIENCE fo	urn:nasa:pds:context_pds3:instrument:instr	2.0	Product_Instrument_PDS3	Submitted
<input type="checkbox"/>	RADIO AND PLASMA WAVE SCIENCE fo	urn:nasa:pds:context_pds3:instrument:instr	1.0	Product_Instrument_PDS3	Submitted
<input type="checkbox"/>	PROJREF	urn:nasa:pds:context_pds3:investigation:mi	2.0	Product_File_Repository	Submitted
<input type="checkbox"/>	PROJREF	urn:nasa:pds:context_pds3:investigation:mi	1.0	Product_File_Repository	Submitted
<input type="checkbox"/>	PERSON	urn:nasa:pds:context_pds3:investigation:mi	2.0	Product_File_Repository	Submitted
<input type="checkbox"/>	PERSON	urn:nasa:pds:context_pds3:investigation:mi	1.0	Product_File_Repository	Submitted
<input type="checkbox"/>	MISSION	urn:nasa:pds:context_pds3:investigation:mi	2.0	Product_File_Repository	Submitted
<input type="checkbox"/>	MISSION	urn:nasa:pds:context_pds3:investigation:mi	1.0	Product_File_Repository	Submitted

Name LID Version Nam Object Type Status

1 of 3 Total Records: 42 Show: 20 records

	<p>Step 5: for both, output file ctlg3.out is empty, and the command line output is: Error: VOLUME catalog object is missing in this archive volume. Can't process further.</p> <p>Step 6: Poor error message has been fixed WARNING: testDir/testCatalog/MPC_review/asteroid.cat is missing. WARNING: testDir/testCatalog/MPC_review/comet.cat is missing. WARNING: testDir/testCatalog/MPC_review/satellite.cat is missing. Apr 7, 2013 2:11:56 AM org.apache.oodt.cas.filemgr.datatransfer.RemoteDataTransferFactory <init> INFO: RemoteDataTransfer enabled: using chunk size: [1024] Apr 7, 2013 2:11:57 AM org.apache.oodt.cas.filemgr.datatransfer.RemoteDataTransferer setFileManagerUrl INFO: Remote Data Transfer to: [http://potato.jpl.nasa.gov:9100] enabled Error: Catalog file (asteroid.cat) is missing in the archive volume and can't get it from the storage service.</p> <p>Step 7: similar to step 1's output. Used to die upon hitting dsmap.cat</p> <p>Step 8: upon forgetting to specify a config file or command-line parameters: Exception: No mode specified. 'm' flag must be specified.</p> <p>The error message used to be meaningless and an issue was created in JIRA. This shows that has been fixed.</p>
Comments	<p>Results met successful test criteria.</p> <p><u>Notes:</u></p> <p>Step 1: catalog -mingest does not register the 2 ref.cat files, the reference info is stored in the database.</p> <p>Step 4: Created a suggestion in http://oodt.jpl.nasa.gov/jira/browse/PDS-163 not to register files listed in multiple voldescs.</p> <p>Step 5: catalog -mingest fails if files to ingest do not include voldesc.cat. Not having voldesc.cat is fairly common. There is a work around by creating voldesc.cat. https://oodt.jpl.nasa.gov/jira/browse/PDS-53 is considered closed</p>
Date of Testing	2013.04.07
Test Personnel	Richard Chen

Test Case ID	GEN.1
Description	Run components distributed over multiple machines on any PDS-supported platforms.
Test Steps	<p>This is from test REG.1 below but posts to a different machine</p> <ol style="list-style-type: none"> 1. http://xxxx.jpl.nasa.gov:8080/registry/extrinsics/logicals/testing.REG.1 in a browser shows no current product has lid "testing.REG.1", 2. curl -X POST -H "Content-type:application/xml" -v -d @testRegistry/test.REG.1b.xml http://xxxx.jpl.nasa.gov:8080/registry/extrinsics 3. Repeat step 1 to see the lid 4. curl -X DELETE --verbose http://xxxx.jpl.nasa.gov:8080/registry/extrinsics/testing.REG.1.v1.0 5. Repeat step 1 to ensure lid no longer exist
Test Results	Step 1:



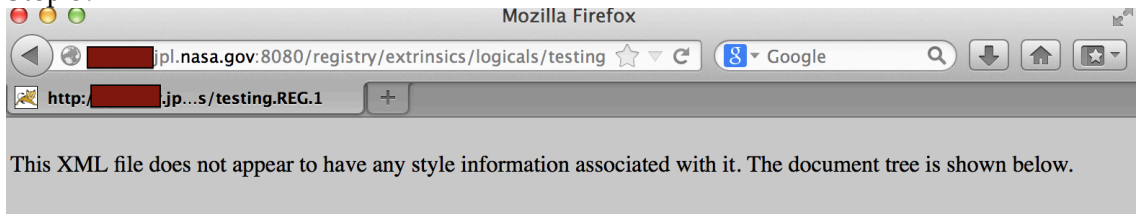
Step 2:

```

* About to connect() to xxxx.jpl.nasa.gov port 8080 (#0)
* Trying 128.149.xx.xx...
* connected
* Connected to xxxx.jpl.nasa.gov (128.149.xx.xx) port 8080 (#0)
> POST /registry/extrinsics HTTP/1.1
> User-Agent: curl/7.24.0 (x86_64-apple-darwin12.0) libcurl/7.24.0 OpenSSL/0.9.8r zlib/1.2.5
> Host: xxxx.jpl.nasa.gov:8080
> Accept: */*
> Content-type:application/xml
> Content-Length: 629
* upload completely sent off: 629 out of 629 bytes
< HTTP/1.1 201 Created
< Server: Apache-Coyote/1.1
< Location: http://xxxx.jpl.nasa.gov:8080/registry/extrinsics/testing.REG.1.v1.0
< Content-Type: application/xml
< Transfer-Encoding: chunked
< Date: Sat, 14 Sep 2013 08:31:29 GMT
* Connection #0 to host xxxx.jpl.nasa.gov left intact
testing.REG.1.v1.0* Closing connection #0

```

Step 3:



```

- <ns2:response>
- <ns2:results>
- <ns2:extrinsicObject versionName="1.0" description="Stolen from http://pdscm/2010/registry/registry-service/operate/index.html with attribute lid above changed for uniqueness" status="Submitted" objectType="Product" name="Product 1234 v1" lid="testing.REG.1" home="http://localhost:8080/registry" guid="testing.REG.1.v1.0">
- <ns2:slot name="last-name" id="195">
  <ns2:value>Doe</ns2:value>
</ns2:slot>
- <ns2:slot name="first-name" id="196">
  <ns2:value>John</ns2:value>
</ns2:slot>
- <ns2:slot name="phone" id="197">
  <ns2:value>(818)777-7777</ns2:value>
  <ns2:value>(818)888-8888</ns2:value>
</ns2:slot>
</ns2:extrinsicObject>
</ns2:results>
</ns2:response>

```

Step 4:

```

* About to connect() to xxxx.jpl.nasa.gov port 8080 (#0)
* Trying 128.149.xx.xx...
* connected
* Connected to xxxx.jpl.nasa.gov (128.149.xx.xx) port 8080 (#0)
> DELETE /registry/extrinsics/testing.REG.1.v1.0 HTTP/1.1

```

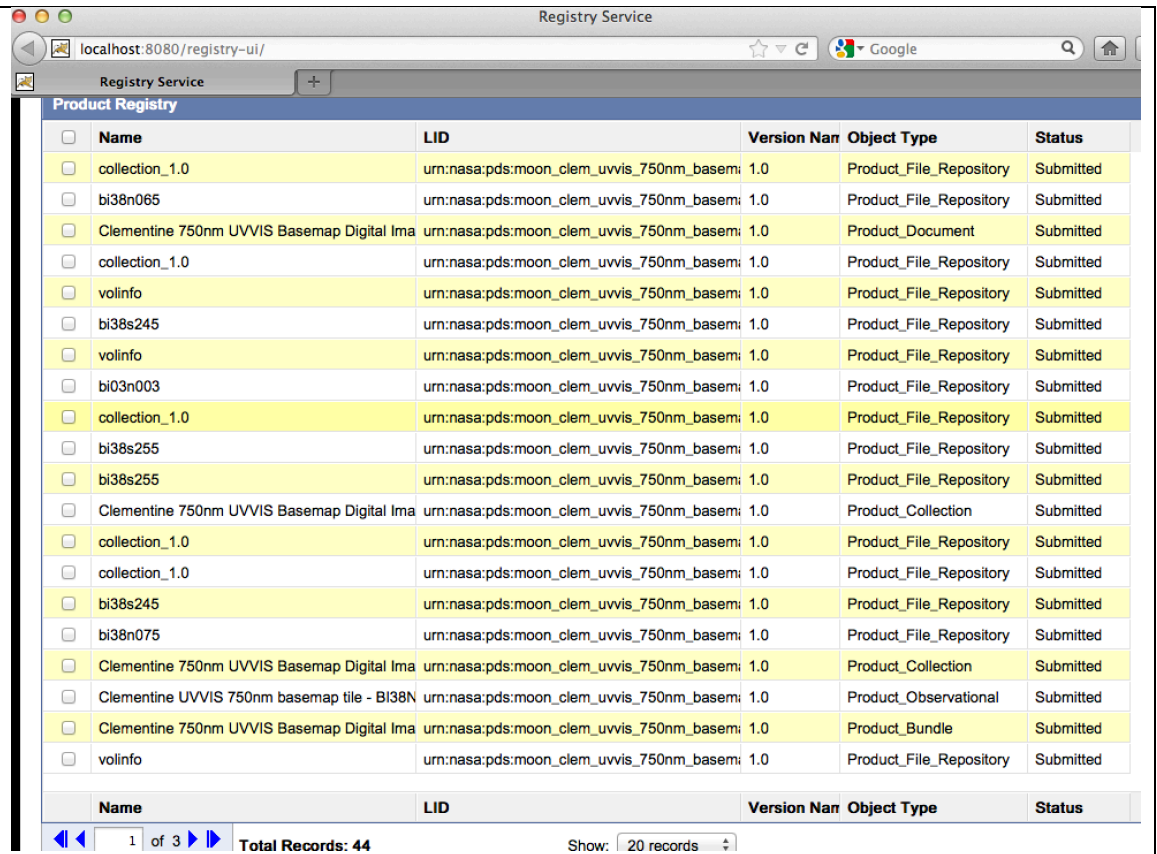
	<pre>> User-Agent: curl/7.24.0 (x86_64-apple-darwin12.0) libcurl/7.24.0 OpenSSL/0.9.8r zlib/1.2.5 > Host: xxxx.jpl.nasa.gov:8080 > Accept: */* < HTTP/1.1 200 OK < Server: Apache-Coyote/1.1 < Content-Type: application/xml < Content-Length: 0 < Date: Sat, 14 Sep 2013 08:34:12 GMT * Connection #0 to host xxxx.jpl.nasa.gov left intact * Closing connection #0</pre> <p>Step 5 same as step 1</p>
Comments	Results met successful test criteria
Date of Testing	2013.09.14
Test Personnel	Richard Chen

Test Case ID	GEN.5
Description	Applications meet Section 508 compliance guidelines.
Test Steps	Submit PDS portal to JPL document review office to get approval for release
Test Results	JPL approved the release result PDS portal made available to general public
Comments	Results met successful test criteria
Date of Testing	June 21, 2013
Test Personnel	Richard Chen

Test Case ID	GEN.7
Description	Document components' capabilities, dependencies, interfaces, installation, operation
Test Steps	Examine such documentation, currently accessible from http://pds-engineering.jpl.nasa.gov/pds2010/development/3.1.0
Test Results	Documents were available and examined.
Comments	Results met successful test criteria
Date of Testing	2013.04.08
Test Personnel	Richard Chen

Test Case ID	HVT.1
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	<p>The harvesting in this test is redundant to tests AAFUNCTION.*. The deleting (not a core function) is different, so if desired:</p> <ol style="list-style-type: none"> 1. Clean database as described in RESETREGISTRY in Section 3.1 2. harvest Clem_Basemap_Bundle -e '*.xml' -c harvest-policy-master.xml > out.txt 3. In browser, check for harvested files. http://localhost:8080/registry-ui/ 4. grep "Registration Package GUID" out.txt 5. Replace <i>guid</i> with the GUID from the previous line: curl -X DELETE -v http://localhost:8080/registry/packages/guid/members 6. In browser, http://localhost:8080/registry-ui/
Test Results	<p>Step 2: out.txt:</p> <pre> PDS Harvest Tool Log Version Version 1.4.0 Time Sun, Apr 07 2013 at 08:22:27 PM Target(s) [Clem_Basemap_Bundle] File Inclusions [* .xml] Severity Level INFO Registry Location http://localhost:8080/registry Registry Package Name The standard harvest policy file, I think Registration Package GUID urn:uuid:3ee6e07e-4774-4cc2-a20a-38973f8b3f93 INFO: XML extractor set to the following default namespace: http://pds.nasa.gov/pds4/pds/v03 INFO: [Clem_Basemap_Bundle/bundle_1.xml] Begin processing. [snip...] INFO: [Clem_Basemap_Bundle/data/bi00_35n/bi03n009.xml] Association has the following GUID: urn:uuid:286401bd-9a8e-4055-aa29-2d0084cc3cac Summary: 12 of 12 file(s) processed, 2 other file(s) skipped 0 error(s), 12 warning(s) 12 of 12 products registered. 32 of 32 ancillary products registered. Product Types Registered: 1 Product_Document 6 Product_Observational 1 Product_Bundle 4 Product_Collection 32 Product_File_Repository 46 of 46 associations registered. End of Log </pre> <p>Step 3:</p>



Step 5:

```
* About to connect() to localhost port 8080 (#0)
* Trying ::1...
* connected
* Connected to localhost (::1) port 8080 (#0)
> DELETE /registry/packages/urn:uuid:3ee6e07e-4774-4cc2-a20a-38973f8b3f93/members HTTP/1.1
> User-Agent: curl/7.24.0 (x86_64-apple-darwin12.0) libcurl/7.24.0 OpenSSL/0.9.8r zlib/1.2.5
> Host: localhost:8080
> Accept: */*
< HTTP/1.1 200 OK
< Server: Apache-Coyote/1.1
< Content-Length: 0
< Date: Mon, 08 Apr 2013 03:28:16 GMT
* Connection #0 to host localhost left intact
* Closing connection #0
```

Step 6: "There is no data to display"

Comments	Results met successful test criteria
Date of Testing	2013.04.07
Test Personnel	Richard Chen

Test Case ID	HVT.2
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	<ol style="list-style-type: none"> 1. Clean database as described in RESETREGISTRY in Section 3.1 2. <code>cd testDir/; mkdir x; mv Clem_Basemap_Bundle/* x</code> 3. <code>harvest Clem_Basemap_Bundle -c harvest-policy-master.xml -l log.txt -P 9001 -w 120</code> 4. In browser, note unchanged Num Records. http://localhost:8080/registry-ui/

	<p>In a different terminal window</p> <ol style="list-style-type: none"> 5. harvest-ctrl --url http://localhost:9001/xmlrpc --operation --isRunning 6. cd <i>testDir</i>; mv x/* Clem_Basemap_Bundle; rmdir x 7. In browser, after at most 120 seconds note changing Num Records. http://localhost:8080/registry-ui/ <p>After Num Records stops increasing</p> <ol style="list-style-type: none"> 8. harvest-ctrl --url http://localhost:9001/xmlrpc --operation --stop 9. grep "products registered" log.txt 10. grep Registration log.txt 11. Replace <i>guid</i> with the GUID from the previous line: curl -X DELETE -v http://localhost:8080/registry/packages/<i>guid</i>/members 12. Check Num Records is original value: http://localhost:8080/registry-ui
Test Results	<p>Step 5: Yes</p> <p>Step 7: Num Records should increase by the number of products registered, which should be the same as in HVT.1</p> <p>Step 8: Crawl Daemon: [http://localhost:9001/xmlrpc]: shutdown successful</p> <p>Step 9:</p> <p style="padding-left: 40px;">0 of 0 new products registered. 0 of 0 new ancillary products registered. 12 of 12 new products registered. 32 of 32 new ancillary products registered.</p> <p>Step 11: Same as HVT.1's step 5</p> <p>Step 12: "There is no data to display" (same as HVT.1's step 6)</p>
Comments	Results met successful test criteria
Date of Testing	2013.04.07
Test Personnel	Richard Chen

Test Case ID	HVT.3
Description	Harvest a large number of files.
Test Steps	<ol style="list-style-type: none"> 1. cd <i>testDir</i>; cp testHarvest/harvestLarge.xml ./harvestLarge.xml 2. Edit harvestLarge.xml: change path of <file> to <i>testDir</i>/testHarvest/ ... 3. harvest testHarvest/Product_Bundle -c harvestContext.xml 4. In browser, check for harvested files. http://localhost:8080/registry-ui/ 5. grep Registration out.txt 6. Replace <i>guid</i> with the GUID from the previous line: curl -X DELETE -v http://localhost:8080/registry/packages/guid/members Concurrently, in a browser, http://localhost:8080/registry-ui 7. http://localhost:8080/registry-ui
Test Results	<p>Step 3: The bottom of out.txt should have:</p> <p style="padding-left: 40px;">Summary: 718 of 718 file(s) processed, 0 skipped 1978 of 2088 products registered. 1370 of 1370 associations registered, 0 skipped End of Log</p>
Comments	This was tested during AAFUNCTION.3. Results met test successful criteria.
Date of Testing	2013.04.09
Test Personnel	Richard Chen

Test Case ID	PRG.1
Description	Generate a PDS4 label from a PDS3 label or a PDS-specific DOM object.
Test Steps	<p>Some files in <i>testDir/testHarvest/</i> come from PDS3 labels. Generate automatically and compare. Step 3 would be better with an xml diff.</p> <ol style="list-style-type: none"> 1. <code>cd testDir/</code> 2. <code>generate -p testPrep/gen_ELE_MOM.LBL -t testPrep/gen_data.vm -o ele_mom.pds4.lbl</code> 3. <code>diff -w testPrep/gen_ele_mom_pds4.xml ele_mom.pds4.lbl</code>
Test Results	<p>Step 3:</p> <pre> 1,7c1 < <Product_Observational xmlns="http://pds.nasa.gov/schema/pds4/pds/v06" < xmlns:pds="http://pds.nasa.gov/schema/pds4/pds/v06" < xmlns:dph="http://pds.nasa.gov/schema/pds4/dph/v01" < xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" < xsi:schemaLocation="http://pds.nasa.gov/schema/pds4/dph/v01 http://pds.jpl.nasa.gov/repository/pds4/examples/dph_examples_6h/dph_example_archive_VG2PLS /schemas/Product_TableChar_tailored_0600h.xsd" < xsi:type="dph:Product_Table_Character"> < --- > <Product_Observational xmlns="http://pds.nasa.gov/schema/pds4/pds/v06" xmlns:dph="http://pds.nasa.gov/schema/pds4/dph/v01" xmlns:pds="http://pds.nasa.gov/schema/pds4/pds/v06" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://pds.nasa.gov/schema/pds4/dph/v01 http://pds.jpl.nasa.gov/repository/pds4/examples/dph_examples_6h/dph_example_archive_VG2PLS /schemas/Product_TableChar_tailored_0600h.xsd" xsi:type="dph:Product_Table_Character"> 24d17 < 71d63 < 80,81c72 < <Node_Area> < </Node_Area> --- > <Node_Area/> 102,129d91 < < <Field_Character> < <name>TIME</name> < <field_number>1</field_number> < <field_location>1</field_location> < <data_type>ASCII_Time</data_type> < <field_length>24</field_length> < <description> < Time column. This field contains time in PDS format < yyyy-mm-ddThh:mm:ss.sssZ. The individual elements of the < time field can be read using the format < (i4,4(1x,i2),1x,f6.3) yr, mon, day, hr, min, sec. < </description> < </Field_Character> < <Field_Character> < <name>ELE_DEN</name> < <field_number>2</field_number> < <field_location>25</field_location> < <data_type>ASCII_Real</data_type> < <field_length>10</field_length> < <unit>count/cm**3</unit> < <description> < Column contains total electron moment density in counts/cm^3. < </description> < <Special_Constants> < <missing_constant>-9.99e+10</missing_constant> < </Special_Constants> < </Field_Character> 134c96 < <data_type>ASCII_Real</data_type> </pre>

	<pre> --- > <data_type>ASCII_REAL</data_type> 136,140c98 < <unit>electronvolt</unit> < <description> < Column contains total electron moment temperature in units of < electron volts. < </description> --- > <description>Column contains total electron moment temperature in units of electron volts.</description> </pre>
Comments	<p>Generate converts most constructs in a PDS3 label into a PDS4 label.</p> <p>Results met test successful criteria</p> <p>Two suggestions were added to JIRA for documentation and handle attached files in labels requests: https://oodt.jpl.nasa.gov/jira/browse/PDS-113 https://oodt.jpl.nasa.gov/jira/browse/PDS-114</p>
Date of Testing	2013.04.08
Test Personnel	Richard Chen

Test Case ID	PRV.1
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. Validate is built upon an API for validation.
Test Steps	<ol style="list-style-type: none"> 1. <code>cd testDir/</code> 2. <code>validate Clem_Basemap_Bundle/data/collection_1.0.xml -m0300a</code> The Clem_Basemap_Bundle was created using PDS schema 0300a. An alternative to -m0300a is <code>-x Clem_Basemap_Bundle/XML_Schema/PDS4_PDS_0300a.xsd -S Clem_Basemap_Bundle/XML_Schema/PDS4_PDS_0300a.sch</code> 3. <code>validate Clem_Basemap_Bundle -e "*.xml" -m0300a</code> 4. Clear errors caused by missing local data dictionary. <code>validate Clem_Basemap_Bundle -e "*.xml" -m0300a -x Clem_Basemap_Bundle/XML_Schema/imaging_dictionary.xsd Clem_Basemap_Bundle/XML_Schema/PDS4_PDS_0300a.xsd</code>
Test Results	<p>Step 2:</p> <pre> PDS Validate Tool Report Configuration: Version 1.3.0 Time Mon, Apr 08 2013 at 10:30:19 AM Core Schemas [PDS4_OPS_0300a.xsd] Core Schematrons [PDS4_OPS_0300a.sch] Model Version 0300a Parameters: Target(s) [Clem_Basemap_Bundle/data/collection_1.0.xml] Severity Level Warnings Recurse Directories true Validation Details: PASS: file: testDir/Clem_Basemap_Bundle/data/collection_1.0.xml Summary: 1 of 1 file(s) processed, 0 skipped 1 of 1 file(s) passed validation End of Report </pre>

Step 3: the files with locally defined keywords (in this example, "img:") fail.

PDS Validate Tool Report

Configuration:

Version 1.3.0
Time Mon, Apr 08 2013 at 10:33:06 AM
Core Schemas [PDS4_OPS_0300a.xsd]
Core Schematrons [PDS4_OPS_0300a.sch]
Model Version 0300a

Parameters:

Target(s) [Clem_Basemap_Bundle]
Severity Level Warnings
Recurse Directories true
File Filter(s) Used [*.xml]

Validation Details:

PASS: file: *testDir/Clem_Basemap_Bundle/bundle_1.xml*

PASS: file: *testDir/Clem_Basemap_Bundle/data/collection_1.0.xml*

FAIL: file: *testDir/Clem_Basemap_Bundle/data/bi00_35n/bi03n003.xml*

ERROR line 71, 42: cvc-complex-type.2.4.c: The matching wildcard is strict, but no declaration can be found for element 'img:Imaging_Instrument_Parameters'.

ERROR line 77, 21: cvc-complex-type.2.4.c: The matching wildcard is strict, but no declaration can be found for element 'img:Geometry'.

ERROR line 86, 64: cvc-complex-type.2.4.c: The matching wildcard is strict, but no declaration can be found for element 'img:Cartography'.

FAIL: file: *testDir/Clem_Basemap_Bundle/data/bi00_35n/bi03n009.xml*

ERROR line 71, 42: cvc-complex-type.2.4.c: The matching wildcard is strict, but no declaration can be found for element 'img:Imaging_Instrument_Parameters'.

ERROR line 77, 21: cvc-complex-type.2.4.c: The matching wildcard is strict, but no declaration can be found for element 'img:Geometry'.

ERROR line 86, 64: cvc-complex-type.2.4.c: The matching wildcard is strict, but no declaration can be found for element 'img:Cartography'.

FAIL: file: *testDir/Clem_Basemap_Bundle/data/bi35_70n/bi38n065.xml*

ERROR line 71, 42: cvc-complex-type.2.4.c: The matching wildcard is strict, but no declaration can be found for element 'img:Imaging_Instrument_Parameters'.

ERROR line 77, 21: cvc-complex-type.2.4.c: The matching wildcard is strict, but no declaration can be found for element 'img:Geometry'.

ERROR line 86, 64: cvc-complex-type.2.4.c: The matching wildcard is strict, but no declaration can be found for element 'img:Cartography'.

FAIL: file: *testDir/Clem_Basemap_Bundle/data/bi35_70n/bi38n075.xml*

ERROR line 71, 42: cvc-complex-type.2.4.c: The matching wildcard is strict, but no declaration can be found for element 'img:Imaging_Instrument_Parameters'.

ERROR line 77, 21: cvc-complex-type.2.4.c: The matching wildcard is strict, but no declaration can be found for element 'img:Geometry'.

ERROR line 86, 64: cvc-complex-type.2.4.c: The matching wildcard is strict, but no declaration can be found for element 'img:Cartography'.

FAIL: file: *testDir/Clem_Basemap_Bundle/data/bi70_35s/bi38s245.xml*

ERROR line 71, 42: cvc-complex-type.2.4.c: The matching wildcard is strict, but no declaration can be found for element 'img:Imaging_Instrument_Parameters'.

ERROR line 77, 21: cvc-complex-type.2.4.c: The matching wildcard is strict, but no declaration can be found for element 'img:Geometry'.

ERROR line 86, 64: cvc-complex-type.2.4.c: The matching wildcard is strict, but no declaration can be found for element 'img:Cartography'.

FAIL: file: *testDir/Clem_Basemap_Bundle/data/bi70_35s/bi38s255.xml*

ERROR line 71, 42: cvc-complex-type.2.4.c: The matching wildcard is strict, but no declaration can be found for element 'img:Imaging_Instrument_Parameters'.

ERROR line 77, 21: cvc-complex-type.2.4.c: The matching wildcard is strict, but no declaration can be found for element 'img:Geometry'.

ERROR line 86, 64: cvc-complex-type.2.4.c: The matching wildcard is strict, but no declaration can be found for element 'img:Cartography'.

PASS: file: *testDir/Clem_Basemap_Bundle/document/collection_1.0.xml*

PASS: file: *testDir/Clem_Basemap_Bundle/document/volinfo.xml*

PASS: file: *testDir/Clem_Basemap_Bundle/miscellaneous/transfer_manifest.xml*

PASS: file: *testDir/Clem_Basemap_Bundle/XML_Schema/collection_1.0.xml*

PASS: file: *testDir/Clem_Basemap_Bundle/XML_Schema/imaging_dictionary.xml*

PASS: file: *testDir/Clem_Basemap_Bundle/XML_Schema/PDS4_PDS_0300a.xml*

Summary:

14 of 14 file(s) processed, 0 skipped

8 of 14 file(s) passed validation

End of Report

Step 4:

PDS Validate Tool Report

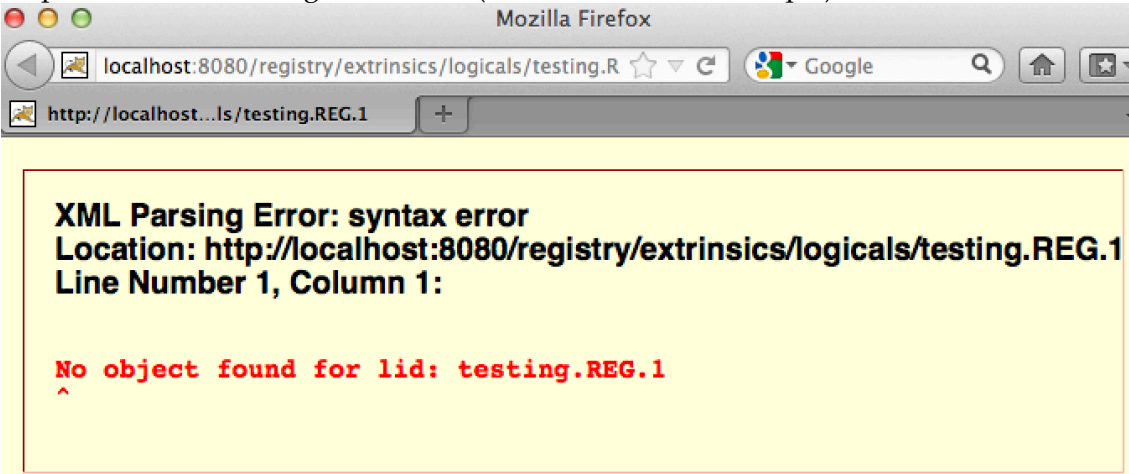
	<p>Configuration: Version 1.3.0 Time Mon, Apr 08 2013 at 01:42:44 PM Core Schematrons [PDS4_OPS_0300a.sch] Model Version 0300a</p> <p>Parameters: Target(s) [Clem_Basemap_Bundle] User-Specified Schemas [Clem_Basemap_Bundle/XML_Schema/imaging_dictionary.xsd, Clem_Basemap_Bundle/XML_Schema/PDS4_PDS_0300a.xsd] Severity Level Warnings Recurse Directories true File Filter(s) Used [* .xml]</p> <p>Validation Details: PASS: file: testDir/Clem_Basemap_Bundle/bundle_1.xml PASS: file: testDir/Clem_Basemap_Bundle/data/collection_1.0.xml PASS: file: testDir/Clem_Basemap_Bundle/data/bi00_35n/bi03n003.xml PASS: file: testDir/Clem_Basemap_Bundle/data/bi00_35n/bi03n009.xml PASS: file: testDir/Clem_Basemap_Bundle/data/bi35_70n/bi38n065.xml PASS: file: testDir/Clem_Basemap_Bundle/data/bi35_70n/bi38n075.xml PASS: file: testDir/Clem_Basemap_Bundle/data/bi70_35s/bi38s245.xml PASS: file: testDir/Clem_Basemap_Bundle/data/bi70_35s/bi38s255.xml PASS: file: testDir/Clem_Basemap_Bundle/document/collection_1.0.xml PASS: file: testDir/Clem_Basemap_Bundle/document/volinfo.xml PASS: file: testDir/Clem_Basemap_Bundle/miscellaneous/transfer_manifest.xml PASS: file: testDir/Clem_Basemap_Bundle/XML_Schema/collection_1.0.xml PASS: file: testDir/Clem_Basemap_Bundle/XML_Schema/imaging_dictionary.xml PASS: file: testDir/Clem_Basemap_Bundle/XML_Schema/PDS4_PDS_0300a.xml</p> <p>Summary: 14 of 14 file(s) processed, 0 skipped 14 of 14 file(s) passed validation End of Report</p>
Comments	<p>Results met successful test criteria.</p> <p>http://oodt.jpl.nasa.gov/jira/browse/PDS-85 was a suggestion that validate 1) try the default schematron, and 2) upon failure, try the schematron listed in the file and note that in the output.</p>
Date of Testing	2013.04.08
Test Personnel	Richard Chen

Test Case ID	PRV.2
Description	Verify that a referenced file exists.
Test Steps	<ol style="list-style-type: none"> 1. cp Clem_Basemap_Bundle/data/collection_1.0.xml . 2. validate collection_1.0.xml -m0300a 3. cp Clem_Basemap_Bundle/data/collection_1.0.tab . 4. validate collection_1.0.xml -m0300a 5. rm collection_1.0.*
Test Results	<p>Step 2:</p> <p>PDS Validate Tool Report Configuration: Version 1.3.0 Time Mon, Apr 08 2013 at 02:07:18 PM Core Schemas [PDS4_OPS_0300a.xsd] Core Schematrons [PDS4_OPS_0300a.sch] Model Version 0300a</p> <p>Parameters: Target(s) [collection_1.0.xml] Severity Level Warnings Recurse Directories true</p> <p>Validation Details: FAIL: file: testDir/collection_1.0.xml</p>

	<p>ERROR line 103: File reference does not exist: collection_1.0.tab</p> <p>Summary: 1 of 1 file(s) processed, 0 skipped 0 of 1 file(s) passed validation End of Report</p> <p>Step 4:</p> <p>PDS Validate Tool Report Configuration: Version 1.3.0 Time Mon, Apr 08 2013 at 02:09:11 PM Core Schemas [PDS4_OPS_0300a.xsd] Core Schematrons [PDS4_OPS_0300a.sch] Model Version 0300a</p> <p>Parameters: Target(s) [collection_1.0.xml] Severity Level Warnings Recurse Directories true</p> <p>Validation Details: PASS: file: <i>testDir/collection_1.0.xml</i></p> <p>Summary: 1 of 1 file(s) processed, 0 skipped 1 of 1 file(s) passed validation End of Report</p>
Comments	Results met successful test criteria
Date of Testing	2013.04.08
Test Personnel	Richard Chen

Test Case ID	PRV.6
Description	Accept schema file specified by file or directory
Test Steps	Step 4 of test PRV.1 supports this capability.
Test Results	Tested during PRV.1
Comments	Results met successful test criteria
Date of Testing	2013.04.08
Test Personnel	Richard Chen

Test Case ID	REG.1
Description	Validate and accept metadata to register an artifact or modify an artifact's registration, query for a registered artifact, delete a registered artifact. Use the REST-based API.
Test Steps	<ol style="list-style-type: none"> 1. <code>cd testDir</code> 2. <code>http://localhost:8080/registry/extrinsics/logicals/testing.REG.1</code> in a browser shows no current product has lid "testing.REG.1", which input files test.REG.1[ab].xml have. 3. <code>curl -X POST -H "Content-type:application/xml" -v -d @testRegistry/test.REG.1a.xml http://localhost:8080/registry/extrinsics</code> attempts to register the bad input file 4. Repeat step 2 to ensure lid still does not exist. 5. <code>curl -X POST -H "Content-type:application/xml" -v -d</code>

	<p>@testRegistry/test.REG.1b.xml http://localhost:8080/registry/extrinsics registers a good input file</p> <ol style="list-style-type: none"> 6. Repeat step 2 to see the lid 7. curl -X DELETE --verbose http://localhost:8080/registry/extrinsics/testing.REG.1.v1.0 8. Repeat step 1 to ensure lid no longer exists 9. curl -X POST -H "Content-type:application/xml" -v -d @testRegistry/test.REG.1c.xml http://localhost:8080/registry/extrinsics registers a good input file with different values for the phone numbers 10. Repeat step 2 to see the changed values
Test Results	<p>Step 2: The error message should be (if lid does exist, run step 7):</p>  <p>Step 3:</p> <pre> * About to connect() to localhost port 8080 (#0) * Trying ::1... * connected * Connected to localhost (::1) port 8080 (#0) > POST /registry/extrinsics HTTP/1.1 > User-Agent: curl/7.24.0 (x86_64-apple-darwin12.0) libcurl/7.24.0 OpenSSL/0.9.8r zlib/1.2.5 > Host: localhost:8080 > Accept: */* > Content-type:application/xml > Content-Length: 653 * upload completely sent off: 653 out of 653 bytes < HTTP/1.1 400 Bad Request < Server: Apache-Coyote/1.1 < Content-Type: text/html;charset=utf-8 < Content-Length: 990 < Date: Thu, 04 Apr 2013 21:28:11 GMT < Connection: close * Closing connection #0 <html><head><title>Apache Tomcat/7.0.30 - Error report</title><style><!--H1 {font-family:Tahoma,Arial,sans-serif;color:white;background-color:#525D76;font-size:22px;} H2 {font-family:Tahoma,Arial,sans-serif;color:white;background-color:#525D76;font-size:16px;} H3 {font-family:Tahoma,Arial,sans-serif;color:white;background-color:#525D76;font-size:14px;} BODY {font-family:Tahoma,Arial,sans-serif;color:black;background-color:white;} B {font-family:Tahoma,Arial,sans-serif;color:white;background-color:#525D76;} P {font-family:Tahoma,Arial,sans-serif;background:white;color:black;font-size:12px;} A {color : black;} A.name {color : black;}HR {color : #525D76;--></style> </head><body><h1>HTTP Status 400 - Bad Request</h1><HR size="1" noshade="noshade"><p>type Status report</p><p>message <u>Bad Request</u></p><p>description <u>The request sent by the client was syntactically incorrect.</u></p><HR size="1" noshade="noshade"><h3>Apache Tomcat/7.0.30</h3></body></html> </pre> <p>Step 4: Same as step 2</p> <p>Step 5:</p> <pre> * About to connect() to localhost port 8080 (#0) * Trying ::1... * connected * Connected to localhost (::1) port 8080 (#0) </pre>

```

> POST /registry/extrinsics HTTP/1.1
> User-Agent: curl/7.24.0 (x86_64-apple-darwin12.0) libcurl/7.24.0 OpenSSL/0.9.8r zlib/1.2.5
> Host: localhost:8080
> Accept: */*
> Content-type:application/xml
> Content-Length: 629
* upload completely sent off: 629 out of 629 bytes
< HTTP/1.1 201 Created
< Server: Apache-Coyote/1.1
< Location: http://localhost:8080/registry/extrinsics/testing.REG.1.v1.0
< Content-Type: application/xml
< Transfer-Encoding: chunked
< Date: Thu, 04 Apr 2013 21:29:21 GMT
* Connection #0 to host localhost left intact
testing.REG.1.v1.0* Closing connection #0

```

Step 6: Upon success, the registry service returns good xml. In firefox:

```

- <ns2:response>
- <ns2:results>
- <ns2:extrinsicObject versionName="1.0" description="Stolen from http://pdscm/2010/registry
/registry-service/operate/index.html with attribute lid above changed for uniqueness"
status="Submitted" objectType="Product" name="Product 1234 v1" lid="testing.REG.1"
home="http://localhost:8080/registry" guid="testing.REG.1.v1.0">
- <ns2:slot name="last-name" id="141">
  <ns2:value>Doe</ns2:value>
</ns2:slot>
- <ns2:slot name="first-name" id="142">
  <ns2:value>John</ns2:value>
</ns2:slot>
- <ns2:slot name="phone" id="143">
  <ns2:value>(818)777-7777</ns2:value>
  <ns2:value>(818)888-8888</ns2:value>
</ns2:slot>
</ns2:extrinsicObject>
</ns2:results>
</ns2:response>

```

Step 7:

```

* About to connect() to localhost port 8080 (#0)
* Trying ::1...
* connected
* Connected to localhost (::1) port 8080 (#0)
> DELETE /registry/extrinsics/testing.REG.1.v1.0 HTTP/1.1
> User-Agent: curl/7.24.0 (x86_64-apple-darwin12.0) libcurl/7.24.0 OpenSSL/0.9.8r zlib/1.2.5
> Host: localhost:8080
> Accept: */*
< HTTP/1.1 200 OK
< Server: Apache-Coyote/1.1
< Content-Type: application/xml
< Content-Length: 0
< Date: Thu, 04 Apr 2013 21:42:42 GMT
* Connection #0 to host localhost left intact
* Closing connection #0


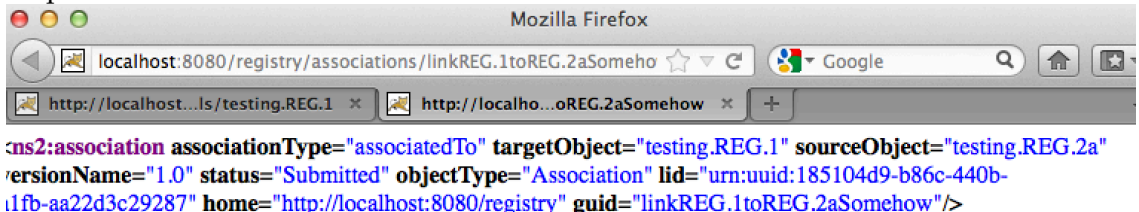
```

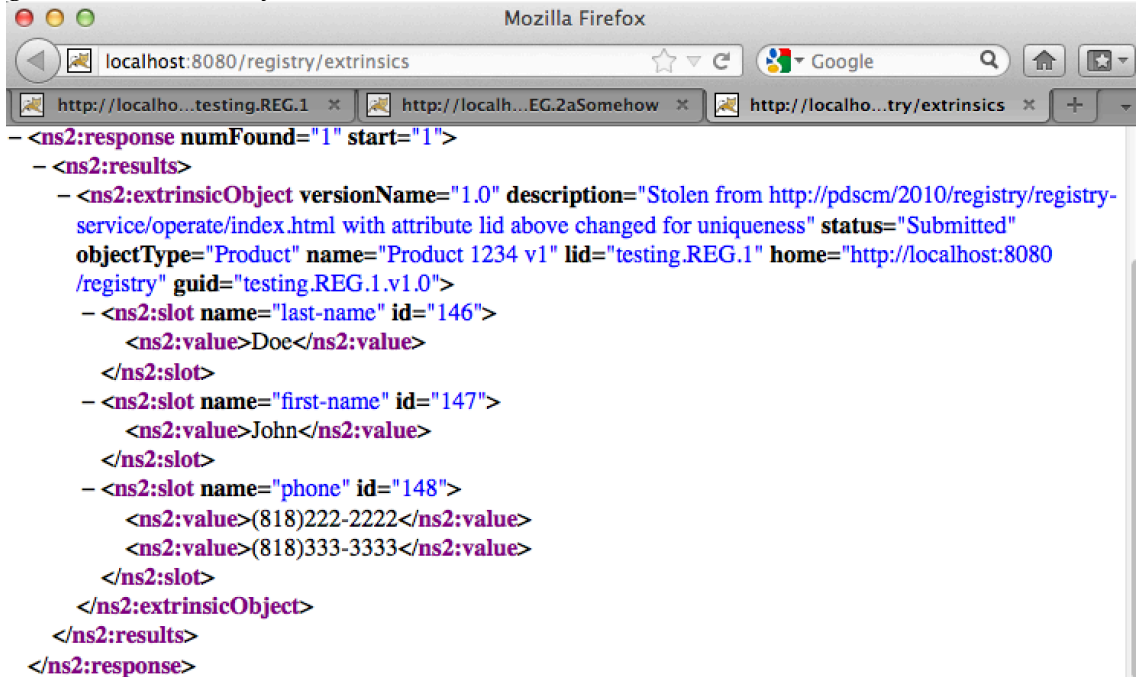
Step 8: Same as step 2

Step 9: Similar to step 5

Step 10: Similar to step 6 but 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	Results met successful test criteria
Date of Testing	2013.04.04
Test Personnel	Richard Chen

Test Case ID	REG.2
Description	Relate artifact registrations, regardless of whether artifact has been registered yet
Test Steps	<ol style="list-style-type: none"> 1. <code>http://localhost:8080/registry/associations/linkREG.1toREG.2aSomehow</code> shows no such associations 2. <code>curl -X POST -H "Content-type:application/xml" -v -d @testRegistry/test.REG.2.xml http://localhost:8080/registry/associations</code> adds 1 association (from a nonexistent sourceLid) to desired targetLid 3. Repeat step 1 to see the association (POSTing the sourceLids referenced in steps 2 and 3 is actually unnecessary)
Test Results	<p>Step 1: The error should look like</p>  <p>If not (i.e. if output looks like step 3's below <code>curl -X DELETE -v http://localhost:8080/registry/associations/linkREG.1toREG.2aSomehow</code></p> <p>Step 2: Benign output messages without "ERROR"</p> <pre>* About to connect() to localhost port 8080 (#0) * Trying ::1... * connected * Connected to localhost (::1) port 8080 (#0) > POST /registry/associations HTTP/1.1 > User-Agent: curl/7.24.0 (x86_64-apple-darwin12.0) libcurl/7.24.0 OpenSSL/0.9.8r zlib/1.2.5 > Host: localhost:8080 > Accept: */* > Content-type:application/xml > Content-Length: 232 * upload completely sent off: 232 out of 232 bytes < HTTP/1.1 201 Created < Server: Apache-Coyote/1.1 < Location: http://localhost:8080/registry/associations/linkREG.1toREG.2aSomehow < Content-Type: text/plain < Transfer-Encoding: chunked < Date: Thu, 04 Apr 2013 21:48:29 GMT * Connection #0 to host localhost left intact linkREG.1toREG.2aSomehow* Closing connection #0</pre> <p>Step 3:</p>  <pre><?xml version="1.0" status="Submitted" objectType="Association" lid="urn:uuid:185104d9-b86c-440b-1fb-aa22d3c29287" home="http://localhost:8080/registry" guid="linkREG.1toREG.2aSomehow"/></pre>
Comments	Results met successful test criteria
Date of Testing	2013.04.04

Test Personnel	Richard Chen
Test Case ID	REG.3
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.
Test Steps	In a browser, http://localhost:8080/registry/extrinsics http://localhost:8080/registry/associations http://localhost:8080/registry/services http://localhost:8080/registry/schemes http://localhost:8080/registry/events http://localhost:8080/registry/packages
Test Results	<p>Specific results will differ, but every item in every class has XML attributes objectType, guid. Each class may have others attributes such as lid, name, home.</p>  <pre> - <ns2:response numFound="1" start="1"> - <ns2:results> - <ns2:extrinsicObject versionName="1.0" description="Stolen from http://pdscm/2010/registry/registry-service/operate/index.html with attribute lid above changed for uniqueness" status="Submitted" objectType="Product" name="Product 1234 v1" lid="testing.REG.1" home="http://localhost:8080/registry" guid="testing.REG.1.v1.0"> - <ns2:slot name="last-name" id="146"> <ns2:value>Doe</ns2:value> </ns2:slot> - <ns2:slot name="first-name" id="147"> <ns2:value>John</ns2:value> </ns2:slot> - <ns2:slot name="phone" id="148"> <ns2:value>(818)222-2222</ns2:value> <ns2:value>(818)333-3333</ns2:value> </ns2:slot> </ns2:extrinsicObject> </ns2:results> </ns2:response> </pre>

```

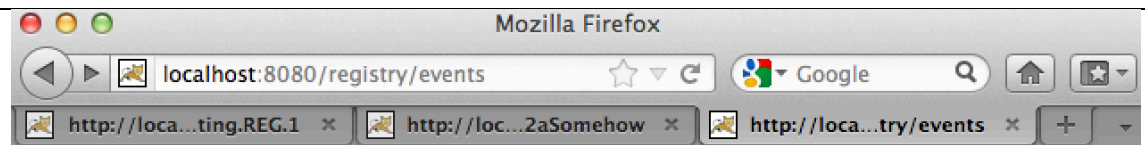
Mozilla Firefox
localhost:8080/registry/associations
- <ns2:response numFound="69" start="1">
  - <ns2:results>
    <ns2:association associationType="associatedTo" targetObject="testing.REG.1"
      sourceObject="testing.REG.2a" versionName="1.0" status="Submitted"
      objectType="Association" lid="urn:uuid:185104d9-b86c-440b-a1fb-aa22d3c29287"
      home="http://localhost:8080/registry" guid="linkREG.1toREG.2aSomehow"/>
    - <ns2:association associationType="urn:registry:AssociationType:HasMember"
      targetObject="urn:nasa:pds:profile:regrep:ObjectType:Product_Collection"
      sourceObject="urn:uuid:18bec309-bede-4fe5-96bc-9af1aa43732e" status="Submitted"
      objectType="Association" home="http://localhost:8080/registry"
      guid="urn:uuid:00be2fec-b598-4396-948f-61699f9c6bcd">
      - <ns2:slot name="targetObjectType" id="47">
        <ns2:value>ClassificationNode</ns2:value>
      </ns2:slot>
    </ns2:association>
    - <ns2:association associationType="urn:registry:AssociationType:HasMember"
      targetObject="urn:nasa:pds:profile:regrep:ObjectType:Product_Mission_PDS3"
      sourceObject="urn:uuid:18bec309-bede-4fe5-96bc-9af1aa43732e" status="Submitted"
      objectType="Association" home="http://localhost:8080/registry"
      guid="urn:uuid:057417a9-f4f6-4416-9c5e-1a7b54d0fe03">
      - <ns2:slot name="targetObjectType" id="67">
        <ns2:value>ClassificationNode</ns2:value>
      </ns2:slot>
    </ns2:association>
  - <ns2:association associationType="urn:registry:AssociationType:HasMember"

```

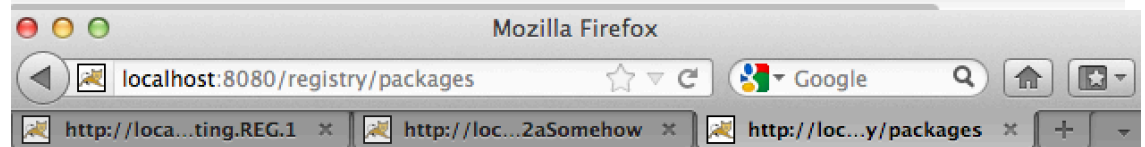
```

Mozilla Firefox
localhost:8080/registry/schemes
- <ns2:response numFound="2" start="1">
  - <ns2:results>
    <ns2:classificationScheme nodeType="UniqueCode" isInternal="true"
      versionName="1.0" description="This is the canonical association type classification
      that is one of the core registry objects" status="Submitted"
      objectType="ClassificationScheme" name="AssociationType"
      lid="urn:registry:classificationScheme:AssociationType" home="http://localhost:8080
      /registry" guid="urn:registry:classificationScheme:AssociationType"/>
    <ns2:classificationScheme nodeType="UniqueCode" isInternal="true"
      versionName="1.0" description="This is the canonical object type classification that is
      one of the core registry objects" status="Submitted" objectType="ClassificationScheme"
      name="ObjectType" lid="urn:registry:classificationScheme:ObjectType"
      home="http://localhost:8080/registry"
      guid="urn:registry:classificationScheme:ObjectType"/>
  </ns2:results>
</ns2:response>

```

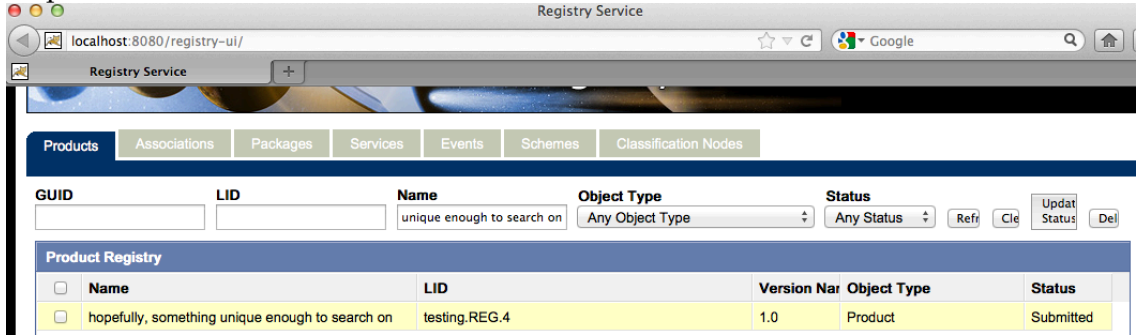


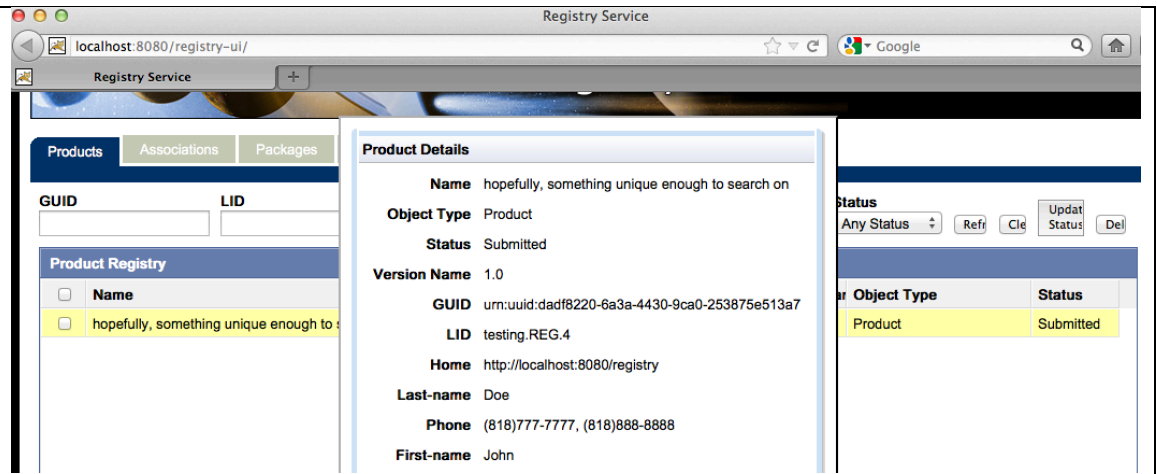
```
- <ns2:response numFound="76" start="1">
- <ns2:results>
- <ns2:auditableEvent user="Unkown" timestamp="2013-04-04T14:48:28.996-07:00"
  requestId="publishObject linkREG.1toREG.2aSomehow" eventType="Created"
  objectType="AuditableEvent" home="http://localhost:8080/registry"
  guid="urn:uuid:67f964dd-19b9-459f-a360-74b2f6083e99">
- <ns2:slot name="affectedObjectTypes" id="150">
  <ns2:value>Association</ns2:value>
</ns2:slot>
  <ns2:affectedObject>linkREG.1toREG.2aSomehow</ns2:affectedObject>
</ns2:auditableEvent>
- <ns2:auditableEvent user="Unknown" timestamp="2013-04-04T14:46:07.123-07:00"
  requestId="publishObject testing.REG.1.v1.0" eventType="Created"
  objectType="AuditableEvent" home="http://localhost:8080/registry"
  guid="urn:uuid:dba5fe8c-4457-4809-a64f-5695f20d2435">
- <ns2:slot name="affectedObjectTypes" id="149">
  <ns2:value>ExtrinsicObject</ns2:value>
</ns2:slot>
  <ns2:affectedObject>testing.REG.1.v1.0</ns2:affectedObject>
</ns2:auditableEvent>
- <ns2:auditableEvent user="Unknown" timestamp="2013-04-04T14:42:42.825-07:00"
  requestId="deleteObjectById testing.REG.1.v1.0" eventType="Deleted"
```



```
- <ns2:response numFound="4" start="1">
- <ns2:results>
  <ns2:registryPackage versionName="1.0" description="This configures PDS object
  types" status="Submitted" objectType="RegistryPackage" name="PDS Objects"
  lid="urn:uuid:308652b2-918f-4c69-b493-764558f65c3a" home="http://localhost:8080
  /registry" guid="urn:uuid:18bec309-bede-4fe5-96bc-9af1aa43732e"/>
  <ns2:registryPackage versionName="1.0" description="This configures the core set of
  registry objects" status="Submitted" objectType="RegistryPackage" name="Core
  Objects" lid="urn:uuid:1246bf55-a65b-4fcc-83ce-78e5f655f809"
  home="http://localhost:8080/registry" guid="urn:uuid:2229ab82-86f3-4171-8f8b-
  69eb3709fda4"/>
  <ns2:registryPackage versionName="1.0" description="This configures the core set of
  associations" status="Submitted" objectType="RegistryPackage" name="Core
  Associations" lid="urn:uuid:8e515047-56c2-464b-96f4-7c7863391a94"
  home="http://localhost:8080/registry" guid="urn:uuid:31af9a0c-b316-4828-969b-
  222d60e4db46"/>
  <ns2:registryPackage versionName="1.0" description="This configures PDS
  association types" status="Submitted" objectType="RegistryPackage" name="PDS
  Associations" lid="urn:uuid:67be7556-ea91-489a-82c6-a66fb53d0115"
  home="http://localhost:8080/registry" guid="urn:uuid:e9e3eccc-63d9-4686-
  b099-44a3970e8b5c"/>
</ns2:results>
</ns2:response>
```

Comments	Results met successful test criteria
Date of Testing	2013.04.04
Test Personnel	Richard Chen

Test Case ID	REG.4
Description	Assign a global unique identifier to a registered artifact with no global unique identifier, query for the registered artifact, delete the registered artifact.
Test Steps	<ol style="list-style-type: none"> 1. curl -X POST -H "Content-type:application/xml" -v -d @testRegistry/test.REG.4.xml http://localhost:8080/registry/extrinsics 2. In a browser, http://localhost:8080/registry-ui 3. Under "Name", enter "hopefully, something unique enough to search on" from test.REG.4.xml. Click "Refresh" 4. Click anywhere on the row to see Product Details including GUID 5. curl -X DELETE -v http://localhost:8080/registry/extrinsics/guidFromLastStep 6. Click the "Refresh" button again.
Test Results	<p>Step 1: Note the value (an assigned LID) of "Location:" in the positive message:</p> <pre>* About to connect() to localhost port 8080 (#0) * Trying ::1... * connected * Connected to localhost (::1) port 8080 (#0) > POST /registry/extrinsics HTTP/1.1 > User-Agent: curl/7.24.0 (x86_64-apple-darwin12.0) libcurl/7.24.0 OpenSSL/0.9.8r zlib/1.2.5 > Host: localhost:8080 > Accept: */* > Content-type:application/xml > Content-Length: 668 * upload completely sent off: 668 out of 668 bytes < HTTP/1.1 201 Created < Server: Apache-Coyote/1.1 < Location: http://localhost:8080/registry/extrinsics/urn:uuid:dadf8220-6a3a-4430-9ca0-253875e513a7 < Content-Type: application/xml < Transfer-Encoding: chunked < Date: Thu, 04 Apr 2013 22:33:54 GMT * Connection #0 to host localhost left intact urn:uuid:dadf8220-6a3a-4430-9ca0-253875e513a7* Closing connection #0</pre> <p>Step 3:</p>  <p>Step 4: Note that the GUID matches the assigned GUID from Step 1</p>



Step 5:

```

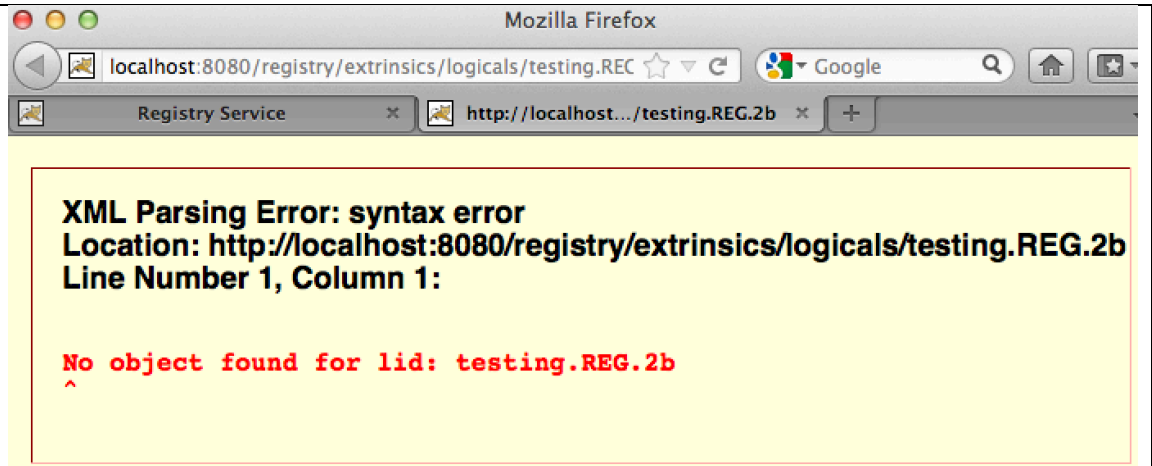
* About to connect() to localhost port 8080 (#0)
* Trying ::1...
* connected
* Connected to localhost (::1) port 8080 (#0)
> DELETE /registry/extrinsics/urn:uuid:dadf8220-6a3a-4430-9ca0-253875e513a7 HTTP/1.1
> User-Agent: curl/7.24.0 (x86_64-apple-darwin12.0) libcurl/7.24.0 OpenSSL/0.9.8r zlib/1.2.5
> Host: localhost:8080
> Accept: */*
< HTTP/1.1 200 OK
< Server: Apache-Coyote/1.1
< Content-Type: application/xml
< Content-Length: 0
< Date: Thu, 04 Apr 2013 22:42:32 GMT
* Connection #0 to host localhost left intact
* Closing connection #0

```

Step 6: The row should be gone

Comments	Results met successful test criteria
Date of Testing	2013.04.04
Test Personnel	Richard Chen

Test Case ID	REG.5
Description	Assign a version to a registered artifact based on its unique identifier
Test Steps	<ol style="list-style-type: none"> 1. http://localhost:8080/registry/extrinsics/logicals/testing.REG.2b shows no current product with lid "testing.REG.2b" 2. Register a product with no versionId attribute <code>curl -X POST -H "Content-type:application/xml" -v -d @testRegistry/test.REG.5a.xml http://localhost:8080/registry/extrinsics</code> 3. Repeat step 1. Note that versionName is 1.0 <p>As of build 3b, versionName is independent of extrinsicObject's attributes versionId, name, and guid.</p>
Test Results	Step 1:



Step 2:

```

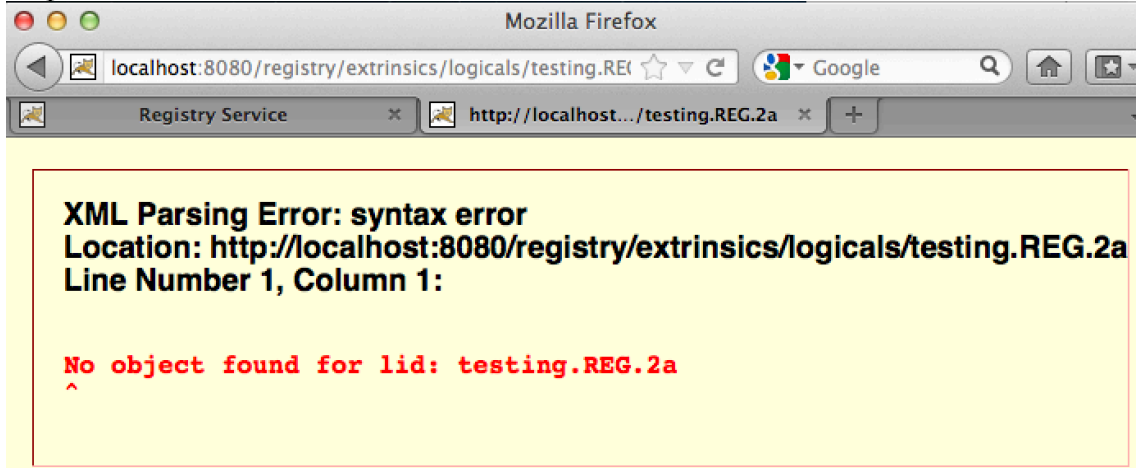
* About to connect() to localhost port 8080 (#0)
* Trying ::1...
* connected
* Connected to localhost (::1) port 8080 (#0)
> POST /registry/extrinsics HTTP/1.1
> User-Agent: curl/7.24.0 (x86_64-apple-darwin12.0) libcurl/7.24.0 OpenSSL/0.9.8r zlib/1.2.5
> Host: localhost:8080
> Accept: */*
> Content-type:application/xml
> Content-Length: 648
* upload completely sent off: 648 out of 648 bytes
< HTTP/1.1 201 Created
< Server: Apache-Coyote/1.1
< Location: http://localhost:8080/registry/extrinsics/urn:uuid:88d08f47-99d5-49fd-80e5-b72a64966bdc
< Content-Type: application/xml
< Transfer-Encoding: chunked
< Date: Thu, 04 Apr 2013 22:57:27 GMT
* Connection #0 to host localhost left intact
urn:uuid:88d08f47-99d5-49fd-80e5-b72a64966bdc* Closing connection #0

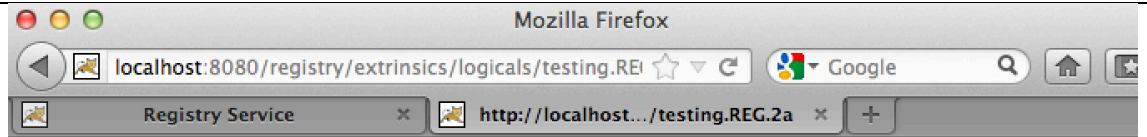
```

Step 3: Note that versionName=1.0 even though input file had no versionId attribute



Comments	Results met successful test criteria
Date of Testing	2013.04.04

Test Personnel	Richard Chen
Test Case ID	REG.6
Description	Allow replacement, approval, deprecation, undeprication, and verification of registered artifacts.
Test Steps	<ol style="list-style-type: none"> 1. In a browser, http://localhost:8080/registry/extrinsics/logicals/testing.REG.2a shows no current product has lid "testing.REG.2a". 2. <code>curl -X POST -H "Content-type:application/xml" -v -d @testRegistry/test.REG.6a.xml http://localhost:8080/registry/extrinsics</code> 3. Repeat step 1 to see the lid 4. In a browser, http://localhost:8080/registry-ui/ Under "LID", enter "testing.REG.2a". Click "Refresh" 5. <code>curl -X POST -H "Content-type:application/xml" -v http://localhost:8080/registry/extrinsics/testing.REG.2a.v1.0/approve</code> 6. In a browser, http://localhost:8080/registry-ui/, click "Refresh" 7. <code>curl -X POST -H "Content-type:application/xml" -v http://localhost:8080/registry/extrinsics/testing.REG.2a.v1.0/deprecate</code> 8. Repeat step 4 to see the Status 9. <code>curl -X POST -H "Content-type:application/xml" -v http://localhost:8080/registry/extrinsics/testing.REG.2a.v1.0/undepricate</code> 10. Repeat step 4 to see the Status
Test Results	<p>Step 1: Browser should show</p>  <p>If not</p> <p><code>curl -X DELETE -v http://localhost:8080/registry/extrinsics/testing.REG.2a.v1.0</code></p> <p>Step 2: Benign output messages without "ERROR", like REG.1's step 5</p> <p>Step 3:</p>

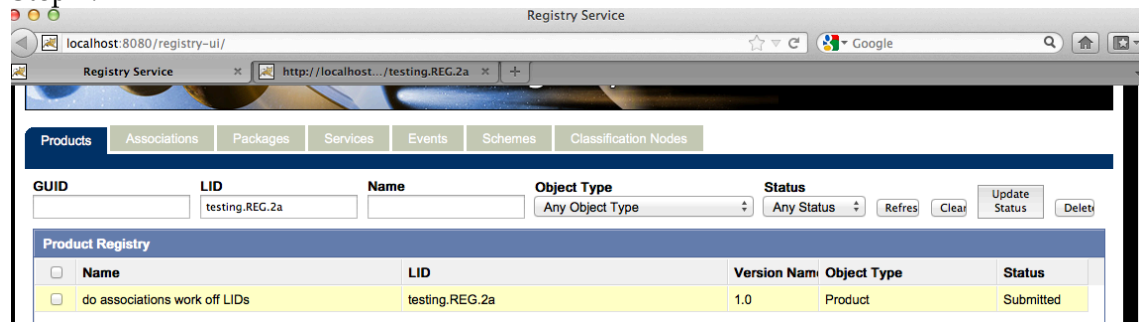


```

- <ns2:response>
  - <ns2:results>
    - <ns2:extrinsicObject versionName="1.0" description="Stolen from http://pdscm/2010/registry
      /registry-service/operate/index.html with attribute lid above changed for uniqueness"
      status="Submitted" objectType="Product" name="do associations work off LIDs"
      lid="testing.REG.2a" home="http://localhost:8080/registry" guid="testing.REG.2a.v1.0">
      - <ns2:slot name="phone" id="167">
        <ns2:value>(818)000-1111</ns2:value>
        <ns2:value>(818)000-2222</ns2:value>
      </ns2:slot>
      - <ns2:slot name="last-name" id="168">
        <ns2:value>Chen</ns2:value>
      </ns2:slot>
      - <ns2:slot name="first-name" id="169">
        <ns2:value>Min</ns2:value>
      </ns2:slot>
    </ns2:extrinsicObject>
  </ns2:results>
</ns2:response>

```

Step 4:



Step 5:

```

* About to connect() to localhost port 8080 (#0)
* Trying ::1...
* connected
* Connected to localhost (::1) port 8080 (#0)
> POST /registry/extrinsics/testing.REG.2a.v1.0/approve HTTP/1.1
> User-Agent: curl/7.24.0 (x86_64-apple-darwin12.0) libcurl/7.24.0 OpenSSL/0.9.8r zlib/1.2.5
> Host: localhost:8080
> Accept: */*
> Content-type:application/xml
< HTTP/1.1 200 OK
< Server: Apache-Coyote/1.1
< Content-Type: application/xml
< Content-Length: 0
< Date: Thu, 04 Apr 2013 23:41:41 GMT
* Connection #0 to host localhost left intact
* Closing connection #0

```

Step 6: same as Step 4 but "Submitted" becomes "Approved"

Step 7:

```

* About to connect() to localhost port 8080 (#0)
* Trying ::1...
* connected
* Connected to localhost (::1) port 8080 (#0)
> POST /registry/extrinsics/testing.REG.2a.v1.0/deprecate HTTP/1.1
> User-Agent: curl/7.24.0 (x86_64-apple-darwin12.0) libcurl/7.24.0 OpenSSL/0.9.8r zlib/1.2.5
> Host: localhost:8080
> Accept: */*
> Content-type:application/xml

```

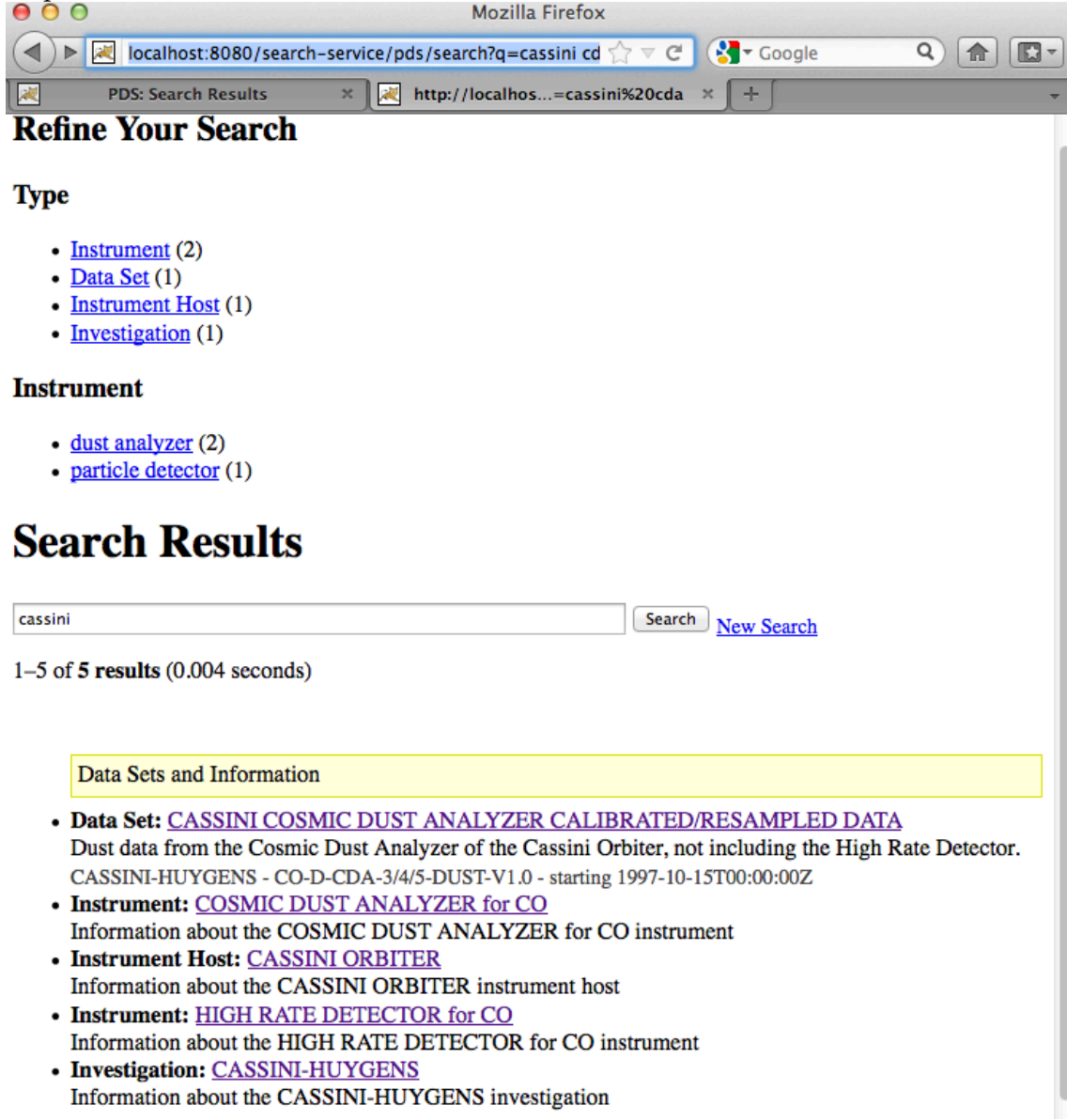
	<pre> < HTTP/1.1 200 OK < Server: Apache-Coyote/1.1 < Content-Type: application/xml < Content-Length: 0 < Date: Thu, 04 Apr 2013 23:43:58 GMT * Connection #0 to host localhost left intact * Closing connection #0 </pre> <p>Step 8: same as Step 4 but "Submitted" becomes "Deprecated"</p> <p>Step 9:</p> <pre> * About to connect() to localhost port 8080 (#0) * Trying ::1... * connected * Connected to localhost (::1) port 8080 (#0) > POST /registry/extrinsics/testing.REG.2a.v1.0/undeprecate HTTP/1.1 > User-Agent: curl/7.24.0 (x86_64-apple-darwin12.0) libcurl/7.24.0 OpenSSL/0.9.8r zlib/1.2.5 > Host: localhost:8080 > Accept: */* > Content-type:application/xml < HTTP/1.1 200 OK < Server: Apache-Coyote/1.1 < Content-Type: application/xml < Content-Length: 0 < Date: Thu, 04 Apr 2013 23:45:09 GMT * Connection #0 to host localhost left intact * Closing connection #0 </pre> <p>Step 10: same as Step 4</p>
Comments	Results met successful test criteria
Date of Testing	2013.04.04
Test Personnel	Richard Chen

Test Case ID	REG.9
Description	Test scalability of registry.
Test Steps	<p>This requires python to be installed on the local machine and possible editing of stressTest.py to change the location of the python executable.</p> <p>Step 3 is configurable. 500000 registrations (as shown) may take 3 days.</p> <ol style="list-style-type: none"> 1. cd testDir/bin 2. ./stressTest.py 3. ./stressTest.py -v -n500000 > ../out.txt 4. grep Time ../out.txt
Test Results	<p>Step 2:</p> <pre> stressTesting.T000000.v1.0 stressTesting.T000001.v1.0 stressTesting.T000002.v1.0 REGSTR 3 good. Time(sec): avg=0.020 median=0.016 stdDev=0.00679 sum=0.1 <?xml version="1.0" encoding="UTF-8" standalone="yes"?><ns2:extrinsicObject xmlns:ns2="http://registry.pds.nasa.gov" versionName="1.0" description="Stolen from http://pdscm/2010/registry/registry-service/operate/index.html with attribute lid above changed for uniqueness" status="Submitted" objectType="Product" name="Stress The Registry " lid="stressTesting.T000000" home="http://localhost:8080/registry" guid="stressTesting.T000000.v1.0"><ns2:slot name="last-name" id="174"><ns2:value>Doe</ns2:value></ns2:slot><ns2:slot name="cannotPossibleBeAnExistingSlot" id="175"><ns2:value>cannot possibly be an existing value</ns2:value></ns2:slot><ns2:slot name="first- name" id="176"><ns2:value>John</ns2:value></ns2:slot><ns2:slot name="phone" id="177"><ns2:value>(818)777-7777</ns2:value><ns2:value>(818)888- 8888</ns2:value></ns2:slot></ns2:extrinsicObject> <?xml version="1.0" encoding="UTF-8" standalone="yes"?><ns2:extrinsicObject xmlns:ns2="http://registry.pds.nasa.gov" versionName="1.0" description="Stolen from http://pdscm/2010/registry/registry-service/operate/index.html with attribute lid above changed for uniqueness" status="Submitted" objectType="Product" name="Stress The Registry " lid="stressTesting.T000001" home="http://localhost:8080/registry" guid="stressTesting.T000001.v1.0"><ns2:slot name="last-name" id="179"><ns2:value>Doe</ns2:value></ns2:slot><ns2:slot name="cannotPossibleBeAnExistingSlot" </pre>

	<pre> id="180"><ns2:value>cannot possibly be an existing value</ns2:value></ns2:slot><ns2:slot name="first- name" id="181"><ns2:value>John</ns2:value></ns2:slot><ns2:slot name="phone" id="182"><ns2:value>(818)777-7777</ns2:value><ns2:value>(818)888- 8888</ns2:value></ns2:slot></ns2:extrinsicObject> <?xml version="1.0" encoding="UTF-8" standalone="yes"?><ns2:extrinsicObject xmlns:ns2="http://registry.pds.nasa.gov" versionName="1.0" description="Stolen from http://pdscm/2010/registry/registry-service/operate/index.html with attribute lid above changed for uniqueness" status="Submitted" objectType="Product" name="Stress The Registry " lid="stressTesting.T000002" home="http://localhost:8080/registry" guid="stressTesting.T000002.v1.0"><ns2:slot name="last-name" id="184"><ns2:value>Doe</ns2:value></ns2:slot><ns2:slot name="cannotPossibleBeAnExistingSlot" id="185"><ns2:value>cannot possibly be an existing value</ns2:value></ns2:slot><ns2:slot name="first- name" id="186"><ns2:value>John</ns2:value></ns2:slot><ns2:slot name="phone" id="187"><ns2:value>(818)777-7777</ns2:value><ns2:value>(818)888- 8888</ns2:value></ns2:slot></ns2:extrinsicObject> VIEW 3 good. Time(sec): avg=0.014 median=0.014 stdDev=0.00014 sum=0.0 stressTesting.T000000.v1.0 deleted stressTesting.T000001.v1.0 deleted stressTesting.T000002.v1.0 deleted DELETE 3 good. Time(sec): avg=0.015 median=0.015 stdDev=0.00060 sum=0.0 Step 4: REGSTR 500000 good. Time(sec): avg=0.008 median=0.005 stdDev=0.13068 sum=3878.9 VIEW 500000 good. Time(sec): avg=0.004 median=0.004 stdDev=0.00196 sum=2097.1 DELETE 500000 good. Time(sec): avg=0.005 median=0.005 stdDev=0.00424 sum=2733.4 </pre>
Comments	Results met successful test criteria
Date of Testing	2013.04.04
Test Personnel	Richard Chen

Test Case ID	RPT.1, RPT.2, RPT.3, RPT.4, RPT.5
Description	Various requirements regarding reporting
Test Steps	Commercial applications, in particular Sawmill, provide the functionality required. Verification of installation suffices.
Test Results	Report Service was installed
Comments	Results met successful test criteria
Date of Testing	June 21, 2013
Test Personnel	Duc Truong

Test Case ID	SCH.2
Description	Comply with Section 508 and adhere to WCAG level A
Test Steps	Submit PDS portal to JPL document review office to get approval for release
Test Results	JPL approved the release result PDS portal made available to general public
Comments	Results met successful test criteria
Date of Testing	June 21, 2013
Test Personnel	Richard Chen

Test Case ID	SCH.3
Description	Provide HTTP-based API to enter queries and return results. The browser utilizes the REST-based API.
Test Steps	<ol style="list-style-type: none"> 1. http://localhost:8080/search-service/pds/search?q=cassini%20cda 2. In the center of http://localhost:8080/search-ui, type "cassini cda" (without quotes) and hit the "Search" button
Test Results	<p>Step 1:</p>  <p>Step 2:</p>

Comments	Results met successful test criteria. An issue posted to JIRA https://oodt.jpl.nasa.gov/jira/browse/PDS-164 was resolved with the explanation that the differences in results are related to the ignoring of SUPERSEDED data through the Search UI, and therefore acceptable.
Date of Testing	2013.04.09
Test Personnel	Richard Chen

Test Case ID	SCH.5
Description	Search based on a sequence of open text keywords. Do so in a browser.
Test Steps	Test AAFUNCTION.4 populates the PDS4 database with PDS3 information. Compare the PDS4 (http://localhost:8080/search-ui) and the PDS3 (http://pds.nasa.gov/tools/data-search-pds3) results for the following searches: <ol style="list-style-type: none"> 1. mro spice 2. cassini cda 3. voyager plasma wave. In Refine Your Search, click "Comet SL9/Jupiter

	<p>Collision”</p> <ol style="list-style-type: none"> 4. mars digital elevation maps 5. neptune 6. jupiter images 7. corona 8. NEAR-A-SPICE-6-V1.0 (a specific data set ID)
Test Results	<p>All searches complete successfully. In general, PDS4 returns many more results than PDS3, which is by design. “Good” and “Bad” refer to PDS4 relative to PDS3:</p> <ol style="list-style-type: none"> 1. bad: first result is “Search Tool: Comet Data Searcher” instead of the data set. 2. bad: no Cassini High Rate Detector dataset, which is related 3. good: no “Search Tool: Comet Data Searcher”. 4. Apparently, “digital elevation map” is not a commonly used term. Both have mostly irrelevant results bad: PDS3 has the 2 best results, datasets “VO1/VO2 MARS VISUAL IMAGING SUBSYSTEM DIGITAL TERRAIN MODEL” and “MRO-M-HIRISE-5-DTM-V1.0”. PDS4 does not have those at all. 5. good: fewer extraneous datasets, e.g. NH-X- good: nine extra instruments, seemingly relevant 6. bad: 13 extra, irrelevant search tools good: extra target GEOGRAPHOS 7. good: 3 missions SUISEI, VEX, ULY. good: far fewer probably irrelevant datasets 8. PDS3 returns 1 result. PDS4 returns 2703. PDS3’s result is probably better.
Comments	<p>Results met successful test criteria.</p> <p>. https://oodt.jpl.nasa.gov/jira/browse/PDS-165 was created to suggest a better rule may be to show PRIMARY_BODY_NAME when it is not N/A</p>
Date of Testing	2013.04.09
Test Personnel	Richard Chen

Test Case ID	SCH.6, SCH.7
Description	Search based on constraints on specific indexes, and narrow results based on more constraints. Support ordering of results based on specified criteria. Results returned as clickable URIs with metadata describing each URI.
Test Steps	<p>Compare the PDS4 (http://localhost:8080/search-ui) and the PDS3 (http://pds.nasa.gov/tools/data-search-pds3) results for the searches below. Clicking on the facets in the left column makes the comparison easier</p> <ol style="list-style-type: none"> 1. mission: mars global surveyor 2. target:mercury
Test Results	<p>All searches complete successfully. “Good” and “Bad” refer to PDS4 relative to PDS3:</p> <ol style="list-style-type: none"> 1. good: much fewer non-MGS missions 2. Very similar results
Comments	Results met successful test criteria.
Date of Testing	2013.04.09
Test Personnel	Richard Chen

Test Case ID	SEC.1, SEC.2, SEC.3, SEC.4
Description	Various requirements regarding security
Test Steps	(From http://pds-engineering.jpl.nasa.gov/pds2010/development/1.2.0/security/) The Security Service provides the authentication and authorization functions for the PDS4 system. The intent of this service is to control access to interfaces and services that require authentication and authorization (e.g., Monitor, Report, Registry interfaces, etc.).
Test Results	The functionality for this service is satisfied by the open source software package OpenDS, which is a directory service supporting the Lightweight Directory Access Protocol (LDAP).
Comments	Results met successful test criteria
Date of Testing	2013.06.21
Test Personnel	Richard Chen

4 Anomalies

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

Testing of build 1b found 1 anomaly.

Testing of build 1c found 2 minor anomalies.

Testing of build 1d found 5 anomalies

Testing of build 2a found 0 anomalies

Testing of build 2b found 3 major, 3 minor anomalies, 3 improvements

Testing of build 2c found 1 major anomaly, 7 improvements

Testing of build 3a found 1 major, 6 minor or improvements

Testing of build 3b did not find any anomaly, provided 6 suggestions (2 has been closed since)

4.1 Issues Entered

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

<http://oodt.jpl.nasa.gov/jira/browse/PDS-34>. Resolved

<http://oodt.jpl.nasa.gov/jira/browse/PDS-35>. Resolved

<http://oodt.jpl.nasa.gov/jira/browse/PDS-45>. Resolved

<http://oodt.jpl.nasa.gov/jira/browse/PDS-46>. Resolved

<http://oodt.jpl.nasa.gov/jira/browse/PDS-47>. Resolved

<http://oodt.jpl.nasa.gov/jira/browse/PDS-48>. Resolved

<http://oodt.jpl.nasa.gov/jira/browse/PDS-49>. Resolved

<http://oodt.jpl.nasa.gov/jira/browse/PDS-52>. Resolved

<http://oodt.jpl.nasa.gov/jira/browse/PDS-53>. Resolved

<http://oodt.jpl.nasa.gov/jira/browse/PDS-54>. Resolved

<http://oodt.jpl.nasa.gov/jira/browse/PDS-55>. Resolved

<http://oodt.jpl.nasa.gov/jira/browse/PDS-56>. Resolved

<http://oodt.jpl.nasa.gov/jira/browse/PDS-57>. Resolved

<http://oodt.jpl.nasa.gov/jira/browse/PDS-58>. Resolved

<http://oodt.jpl.nasa.gov/jira/browse/PDS-63>. Resolved

<http://oodt.jpl.nasa.gov/jira/browse/PDS-85>. Suggestion, not an anomaly (created prior to Build 3b)

<http://oodt.jpl.nasa.gov/jira/browse/PDS-86>. Resolved

<http://oodt.jpl.nasa.gov/jira/browse/PDS-87>. Resolved
<http://oodt.jpl.nasa.gov/jira/browse/PDS-88>. Resolved
<http://oodt.jpl.nasa.gov/jira/browse/PDS-89>. Resolved
<https://oodt.jpl.nasa.gov/jira/browse/PDS-113>. Suggestion, not an anomaly
<https://oodt.jpl.nasa.gov/jira/browse/PDS-114>. Suggestion, not an anomaly
<https://oodt.jpl.nasa.gov/jira/browse/PDS-123>. Resolved
<https://oodt.jpl.nasa.gov/jira/browse/PDS-125>. Resolved
<https://oodt.jpl.nasa.gov/jira/browse/PDS-134>. Resolved
<https://oodt.jpl.nasa.gov/jira/browse/PDS-161>. Resolved
<https://oodt.jpl.nasa.gov/jira/browse/PDS-162>. Resolved
<https://oodt.jpl.nasa.gov/jira/browse/PDS-163>. Suggestion, not an anomaly
<https://oodt.jpl.nasa.gov/jira/browse/PDS-164>. Resolved
<https://oodt.jpl.nasa.gov/jira/browse/PDS-165>. Suggestion, not an anomaly

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

4.2 Major Issues

None

4.3 Open anomalies

See 4.1 above.

5 Test Data

Test data used can be downloaded from:

<http://pds.nasa.gov/pds4/orr0913/PDS4test.build3b.tgz>

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 MC - PDS Management Council

SDD - Software Design Document

SRD - Software Requirements Document