

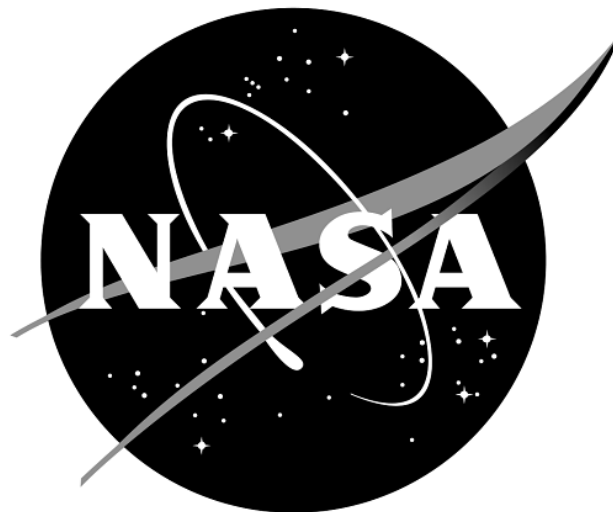
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Plan Document

NASA Planetary Data System

PDS 2010 System

Build 2 Test Procedures & Report



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**No index entries found. Change Log**

<b>Revision</b>	<b>Date</b>	<b>Description</b>	<b>Author</b>
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

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# 1 Introduction

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## 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 PDS 2010 system deployed for Build 2b. It verifies that PDS 2010 system Build 2b is compliant with Build 2 requirements, and ensures that the beta system functions are without critical defects. Test Traceability Matrix can be found in the PDS 2010 Build 2b Test Plan Section 4.

For PDS 2010 Build 2b, the following Prototype Software will be deployed at the EN:

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

In future tests, the following Prototype Software will be deployed at one or two Discipline Nodes:

- Registry, Harvest services, and Report client

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

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

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## 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.

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## 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] PDS 2010 Project Plan, March 2010.

[4] PDS 2010 Operations Concept, March 2010.

[4] System Architecture Specification, May 2010.

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

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

- Registry Service, June 11, 2011
- Harvest Tool, June 12, 2011
- Security Service, June 11, 2011
- Report Service, June 12, 2011
- Preparation Tools, June 15, 2011
- Search Service, June 12, 2011

[7] PDS 2010 Build 2 Test Plan, February 2012.

## 2 Executive Summary

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### 2.1 Assessment

The tools and services tested here work with the versions specified. However, changes to them and/or the information model broke tests that worked previously, and that is very likely to happen again.

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### 2.2 Major Findings

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

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### 2.3 Success

Tools and services performed as documented.

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### 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
27	26	1	3

### 3 Test Procedures

The following section lists procedures and results for the test cases identified as the suite of “PDS 2010 Build 2 system tests” in the PDS 2010 Build 2 Test Plan Section 3. These tests will be run as necessary to re-test the system after any software changes.

The test procedures assume the following software are installed locally:

- an XML-friendly web **browser**, e.g. firefox
- **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.
- an **XML editor**, e.g. eclipse. This can be skipped, though not recommended.
- **Harvest**, <http://pds-engineering.jpl.nasa.gov/pds2010/development/2.1.0/harvest>
- **Validate**, <http://pds-engineering.jpl.nasa.gov/pds2010/development/2.1.0/preparation/validate>
- **Catalog**, <http://pds-engineering.jpl.nasa.gov/pds2010/development/2.1.0/ingest/catalog>

The **Registry**, <http://pds-engineering.jpl.nasa.gov/pds2010/development/2.1.0/registry/registry-service/>, can reside remotely or locally, controlled or uncontrolled. Local installation makes testing easier, but installation and configuration can be difficult.

Please follow the installation instructions. For example, the Harvest and harvest-ctrl commands usually require editing to use the correct registry, and those two and Validate also require editing to set environment variable JAVA\_HOME.

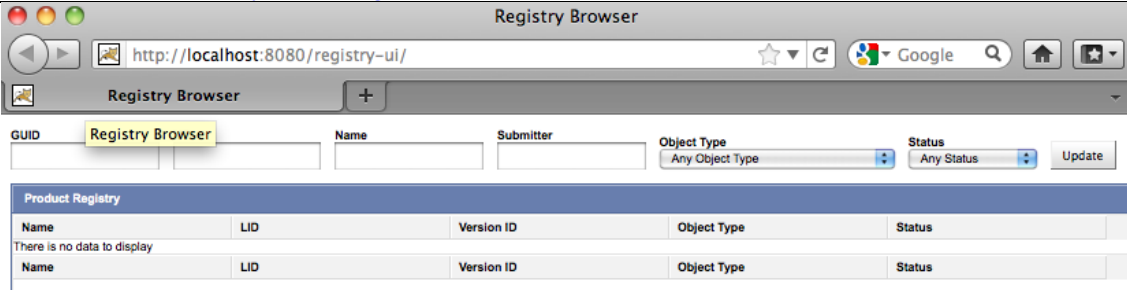
The tests are written for Unix, though running on Windows should require only simple changes.

In the test procedures below, globally replace:

<i>testDir</i>	directory where input files are extracted
<i>harvestOptions</i>	<ul style="list-style-type: none"> <li>• If the registry is uncontrolled, nothing</li> <li>• Else “-uusername -ppassword”</li> </ul> Add “-k keystorePassword” depending on the registry configuration, e.g. if Harvest gives error “Keystore password must be specified”
<i>curlOptions</i>	<ul style="list-style-type: none"> <li>• If the registry is uncontrolled, nothing</li> <li>• Else “-uusername:password -k”</li> </ul>
<i>registryURL</i>	Depends. <ul style="list-style-type: none"> <li>• <a href="http://localhost:8080">http://localhost:8080</a>, local, uncontrolled. Requires installing and configuring Apache Tomcat and the Registry</li> </ul> Others that may be available: <ul style="list-style-type: none"> <li>• <a href="https://localhost:8080">https://localhost:8080</a>, local, controlled. Requires installing and configuring Apache Tomcat, the Registry, and Security</li> </ul>

	<ul style="list-style-type: none"> <li>• <a href="https://pdstest.jpl.nasa.gov:443">https://pdstest.jpl.nasa.gov:443</a>, a remote, controlled server</li> </ul>
--	--

Test Case ID	SETUP for all tests
Description	This is not really a test.
Test Steps	<p>Get PDS4test.build2b.zip from the "Test Procedures Input" link at <a href="http://pds-engineering.jpl.nasa.gov/index.cfm?pid=145&amp;cid=175">http://pds-engineering.jpl.nasa.gov/index.cfm?pid=145&amp;cid=175</a>. Extract the input files:</p> <pre> mkdir testDir cd testDir unzip PDS4test.build2b.zip mkdir holdings                     </pre>
Test Results	
Comments	
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

Test Case ID	AATESTME.T1
Description	Query for a registered artifact
Test Steps	<p>Verify in browser: <a href="registryURL/registry-ui">registryURL/registry-ui</a>          If "Product Registry" shows rows of data, type "TESTING*" in LID, then hit "Update".          If registry-ui is not installed,  <a href="registryURL/registry/extrinsics/logicals/TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-V1.0">registryURL/registry/extrinsics/logicals/TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-V1.0</a></p>
Test Results	 <p>If registry-ui has data to display, delete the product from the registry via AATESTME.T5 and re-run this test.</p>
Comments	
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

Test Case ID	AATESTME.T2
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Description	<p>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.</p>
Test Steps	<p>Off-the-shelf XML editors, both free (e.g. eclipse) and commercial (oxygen), provide the functionality required. Verification of installation suffices. Thus,</p> <pre>mkdir holdings cp testAAtestme/ minimallImage.xml holdings/ minimallImage.xml</pre> <p>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/ minimallImage.xml (instead of copying above). Tutorials for all editors are widely available. The file's contents:</p> <pre>&lt;?xml version="1.0" encoding="UTF-8"?&gt; &lt;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_products/schema s/Product_Array2DImage_taiored_0600h.xsd"   xsi:type="dph:Product_Array_2D_Image"&gt;   &lt;Identification_Area&gt;   &lt;logical_identifier&gt;TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M- IMP-2-EDR-V1.0&lt;/logical_identifier&gt;   &lt;version_id&gt;1.0&lt;/version_id&gt;   &lt;title&gt;MARS PATHFINDER LANDER Experiment&lt;/title&gt;   &lt;information_model_version&gt;0.6.0.0.h&lt;/information_model_version&gt;   &lt;product_class&gt;Product_Observational&lt;/product_class&gt;   &lt;Modification_History&gt;   &lt;Modification_Detail&gt;   &lt;modification_date&gt;2012-01-10&lt;/modification_date&gt;   &lt;version_id&gt;1.0&lt;/version_id&gt;   &lt;description&gt;   extracted metadata from PDS3 catalog and   modified to comply with PDS4 Information Model   &lt;/description&gt;   &lt;/Modification_Detail&gt;   &lt;/Modification_History&gt;   &lt;/Identification_Area&gt;   &lt;Observation_Area&gt;   &lt;comment&gt;Observational Intent&lt;/comment&gt;   &lt;Time_Coordinates&gt;   &lt;start_date_time&gt;1997-07-07T23:48:33.442Z&lt;/start_date_time&gt;   &lt;stop_date_time&gt;1997-07-07T23:48:51.766Z&lt;/stop_date_time&gt;   &lt;local_mean_solar_time&gt;not applicable&lt;/local_mean_solar_time&gt;   &lt;local_true_solar_time&gt;not applicable&lt;/local_true_solar_time&gt;   &lt;/Time_Coordinates&gt;   &lt;Investigation_Area&gt;   &lt;name&gt;MARS_PATHFINDER&lt;/name&gt;   &lt;type&gt;Mission&lt;/type&gt;   &lt;Internal_Reference&gt;   &lt;lidvid_reference&gt;urn:nasa:pds:investigation.MARS_PATHFINDER:1.0&lt;/lidvid_reference&gt;   &lt;reference_type&gt;has_investigation&lt;/reference_type&gt;   &lt;/Internal_Reference&gt;   &lt;/Investigation_Area&gt;   &lt;Observing_System&gt;   &lt;name&gt;Observing System for MPFL+IMP&lt;/name&gt;   &lt;Observing_System_Component&gt;   &lt;name&gt;MPFL&lt;/name&gt;   &lt;observing_system_component_type&gt;Spacecraft&lt;/observing_system_component_type&gt;   &lt;description&gt;instrument_host MPFL&lt;/description&gt;   &lt;Internal_Reference&gt;   &lt;lid_reference&gt;urn:nasa:pds:instrument_host.MPFL&lt;/lid_reference&gt;   &lt;reference_type&gt;has_instrument_host&lt;/reference_type&gt;   &lt;/Internal_Reference&gt;   &lt;/Observing_System_Component&gt;</pre>

```

<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:instrument.IMP__MPFL</lid_reference>
    <reference_type>has_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:target.MARS::1.0</lidvid_reference>
    <reference_type>has_target</reference_type>
  </Internal_Reference>
</Target_Identification>
<!-- ===== -->
<!-- Reference the attributes that were imported from the -->
<!-- local dictionary (using the local namespace (dph) -->
<!-- ===== -->
<Mission_Area>
  <dph:spacecraft_clock_start_count>1246943630</dph:spacecraft_clock_start_count>
  <dph:spacecraft_clock_stop_count>unkown</dph:spacecraft_clock_stop_count>
</Mission_Area>
<Node_Area>
</Node_Area>
</Observation_Area>
<Reference_List>
<!--
  <Internal_Reference>
    <lid_reference>urn:nasa:pds:investigation.MPFL::1.0</lid_reference>
    <reference_type>has_investigation</reference_type>
  </Internal_Reference>
  <Internal_Reference>
    <lid_reference>urn:nasa:pds:instrument_host.MPFL</lid_reference>
    <reference_type>has_instrument_host</reference_type>
  </Internal_Reference>
  <Internal_Reference>
    <lid_reference>urn:nasa:pds:instrument.IMP__MPFL</lid_reference>
    <reference_type>has_instrument</reference_type>
  </Internal_Reference>
  <Internal_Reference>
    <lid_reference>urn:nasa:pds:target.MARS</lid_reference>
    <reference_type>has_target</reference_type>
  </Internal_Reference>
  <Internal_Reference>
    <lid_reference>urn:nasa:pds:node.IMG</lid_reference>
    <reference_type>has_node</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>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>0</offset>
    <axes>2</axes>
    <axis_index_order>FIRST_INDEX_FASTEST</axis_index_order>
    <axis_storage_order>LINE_SAMPLE</axis_storage_order>

```

	<pre> &lt;encoding_type&gt;BINARY&lt;/encoding_type&gt; &lt;Array_Element&gt;   &lt;data_type&gt;UnsignedMSB2&lt;/data_type&gt;   &lt;unit&gt;data number&lt;/unit&gt;   &lt;scaling_factor&gt;0&lt;/scaling_factor&gt;   &lt;value_offset&gt;0&lt;/value_offset&gt; &lt;/Array_Element&gt; &lt;Array_Axis&gt;   &lt;axis_name&gt;LINE&lt;/axis_name&gt;   &lt;elements&gt;248&lt;/elements&gt;   &lt;unit&gt;not applicable&lt;/unit&gt;   &lt;sequence_number&gt;1&lt;/sequence_number&gt; &lt;/Array_Axis&gt; &lt;Array_Axis&gt;   &lt;axis_name&gt;SAMPLE&lt;/axis_name&gt;   &lt;elements&gt;256&lt;/elements&gt;   &lt;unit&gt;not applicable&lt;/unit&gt;   &lt;sequence_number&gt;2&lt;/sequence_number&gt; &lt;/Array_Axis&gt; &lt;Object_Statistics&gt;   &lt;local_identifier&gt;MPFL_M_IMP_STATISTICS&lt;/local_identifier&gt;   &lt;maximum&gt;4095&lt;/maximum&gt;   &lt;minimum&gt;145&lt;/minimum&gt;   &lt;mean&gt;1385.3000&lt;/mean&gt;   &lt;standard_deviation&gt;538.0290&lt;/standard_deviation&gt; &lt;/Object_Statistics&gt; &lt;/Array_2D_Image&gt; &lt;/File_Area_Observational&gt; &lt;/Product_Observational&gt; </pre>
Test Results	File minimalImage.xml sits in directory holdings/.
Comments	
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

Test Case ID	AATESTME.T3
Description	For Harvest, provide a command-line interface, accept a configuration file, determine candidates for registration, capture metadata, submit metadata to the Registry Service. Registry accepts the artifact, assigns a global unique ID to the product.
Test Steps	<ol style="list-style-type: none"> <li>1. cp testAAtestme/harvestPolicy.xml .</li> <li>2. Edit ./harvestPolicy.xml to modify &lt;path&gt; to testDir/holdings</li> <li>3. Create the data file referred to in the label: touch holdings/i943630r.raw</li> <li>4. harvest harvestOptions -c harvestPolicy.xml</li> <li>5. Verify in browser: <a href="#">registryURL/registry-ui</a></li> </ol>
Test Results	<p>Step 4 returns the following:</p> <pre> PDS Harvest Tool Log Version          Version 1.1.0 Time             Thu, Feb 09 2012 at 12:53:57 PM Registry Location http://localhost:8080/registry Registry Package Name Harvest-Package_20120209125356 Registration Package GUID urn:uuid:c604be9d-e5c4-4ffd-8db7-c931ca835b32 INFO: XML extractor set to the following default namespace: http://pds.nasa.gov/schema/pds4/pds/v06 INFO: [testDir/holdings/minimalImage.xml] Begin processing. INFO: [testDir/holdings/minimalImage.xml] Setting LIDVID-based association, 'urn:nasa:pds:investigation.MARS_PATHFINDER::1.0', under slot name 'has_investigation'. INFO: [testDir/holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:instrument_host.MPFL', under slot name 'has_instrument_host'. INFO: [testDir/holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:instrument.IMP__MPFL', under slot name 'has_instrument'. </pre>

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

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

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

SUCCESS: [testDir/holdings/minimalImage.xml] Successfully registered product:

TESTING:example.DPH.sampleProducts:exampleProducts:Array2D\_Image.MPFL-M-IMP-2-EDR-V1.0:1.0

INFO: [testDir/holdings/minimalImage.xml] Product has the following GUID: [urn:uuid:014bc77b-4f82-464d-a03d-9a121fc5b6e2](#)

SUCCESS: [testDir/holdings/minimalImage.xml] Successfully registered product:

TESTING:example.DPH.sampleProducts:exampleProducts:Array2D\_Image.MPFL-M-IMP-2-EDR-V1.0:minimalImage.xml:1.0

INFO: [testDir/holdings/minimalImage.xml] Product has the following GUID: [urn:uuid:be8a6342-06fa-44fb-9430-07d7304d646a](#)

SUCCESS: [testDir/holdings/minimalImage.xml] Successfully registered product:

TESTING:example.DPH.sampleProducts:exampleProducts:Array2D\_Image.MPFL-M-IMP-2-EDR-V1.0:i943630r.raw:1.0

INFO: [testDir/holdings/minimalImage.xml] Product has the following GUID: [urn:uuid:de5a80e0-d396-4f01-9174-06b921f81efa](#)

SUCCESS: [testDir/holdings/minimalImage.xml] Successfully registered association to

TESTING:example.DPH.sampleProducts:exampleProducts:Array2D\_Image.MPFL-M-IMP-2-EDR-V1.0:minimalImage.xml:1.0

INFO: [testDir/holdings/minimalImage.xml] Association has the following GUID: urn:uuid:21e80248-dc8a-491a-ad5d-3199db6272be

SUCCESS: [testDir/holdings/minimalImage.xml] Successfully registered association to

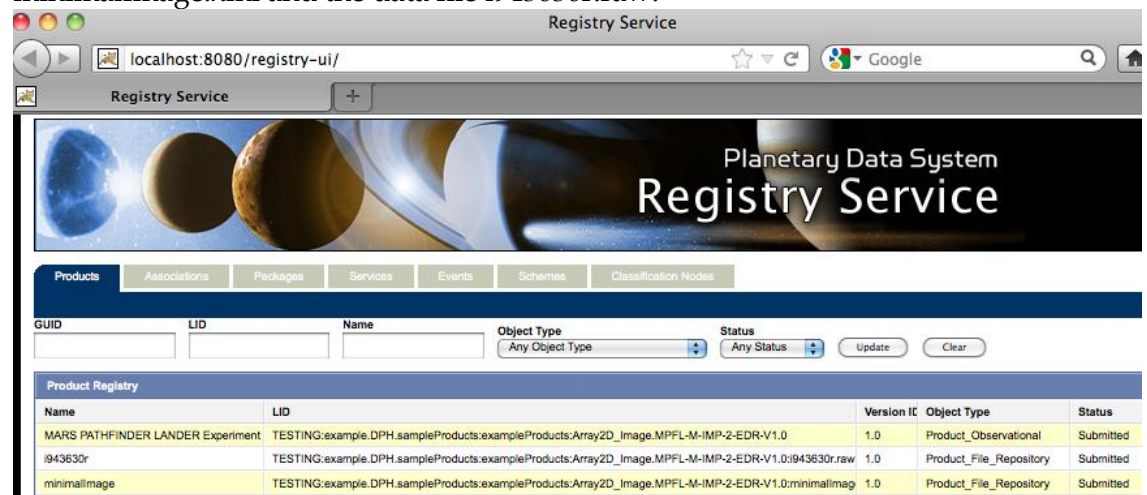
TESTING:example.DPH.sampleProducts:exampleProducts:Array2D\_Image.MPFL-M-IMP-2-EDR-V1.0:i943630r.raw:1.0

INFO: [testDir/holdings/minimalImage.xml] Association has the following GUID: urn:uuid:72d58cb2-31d3-414f-a652-a974348b3481

Summary:  
 1 of 1 file(s) processed, 0 skipped  
 3 of 3 products registered.  
 2 of 2 associations registered, 0 skipped  
 End of Log

Harvest registered product holdings/minimalImage.xml because it has a <product\_class> that matches harvestPolicy.xml's objectType.

Step 5 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.



Comments	
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

Test Case ID	AATESTME.T4
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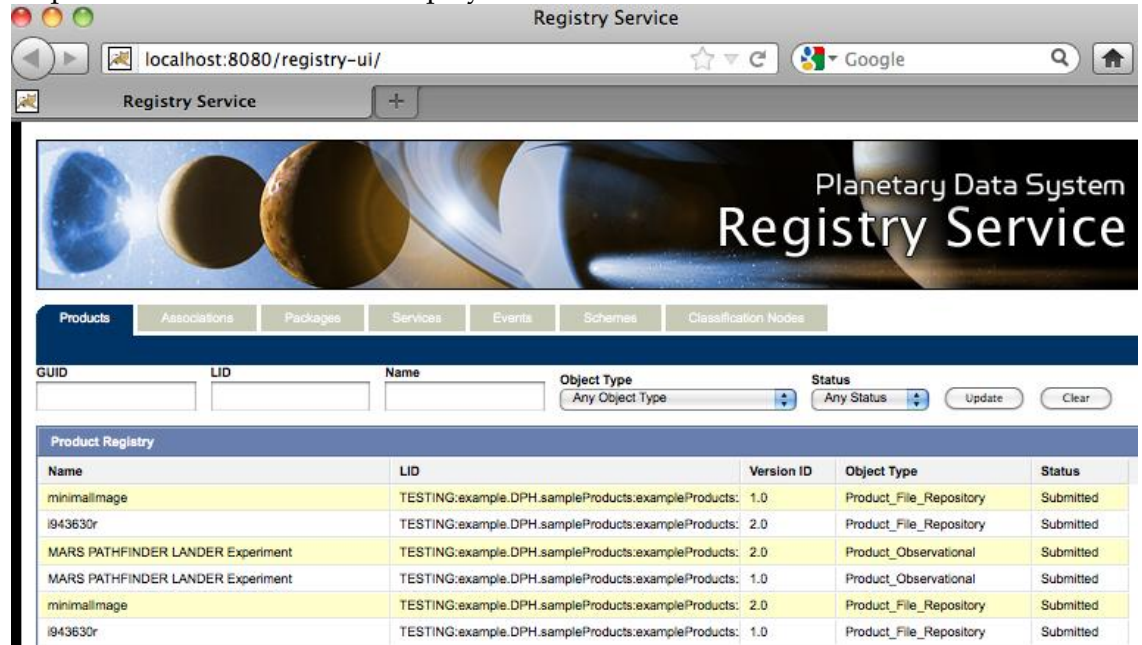
Description	(Skip this test if registry is uncontrolled) Authorize only authenticated users access to a controlled capacity.
Test Steps	1. harvest <i>harvestOptions</i> -username -pBAD_PASSWORD -c harvestPolicy.xml
Test Results	<p>Step 2:</p> <pre>&lt;html&gt;&lt;head&gt;&lt;title&gt;Apache Tomcat/6.0.26 - Error report&lt;/title&gt;&lt;style&gt;&lt;!--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;}-&gt;&lt;/style&gt; &lt;/head&gt;&lt;body&gt;&lt;h1&gt;HTTP Status 401 - &lt;/h1&gt;&lt;HR size="1" noshade="noshade"&gt;&lt;p&gt;&lt;b&gt;type&lt;/b&gt; Status report&lt;/p&gt;&lt;p&gt;&lt;b&gt;message&lt;/b&gt;&lt;u&gt;&lt;/u&gt;&lt;/p&gt;&lt;p&gt;&lt;b&gt;description&lt;/b&gt; &lt;u&gt;This request requires HTTP authentication ().&lt;/u&gt;&lt;/p&gt;&lt;HR size="1" noshade="noshade"&gt;&lt;h3&gt;Apache Tomcat/6.0.26&lt;/h3&gt;&lt;/body&gt;&lt;/html&gt;</pre> <p>Summary:  0 of 0 file(s) processed, 0 skipped  0 of 0 products registered.  0 of 0 associations registered, 0 skipped  End of Log</p>
Comments	
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

Test Case ID	AATESTME.T5
Description	Update and delete registered artifacts.
Test Steps	<ol style="list-style-type: none"> <li>1. In holdings/minimalImage.xml, change Identification_Area/version_id to 4.4</li> <li>2. harvest <i>harvestOptions</i> -c harvestPolicy.xml</li> <li>3. Verify in browser: <a href="#">registryURL/registry-ui</a></li> <li>4. In AATESTME.T3's Test Results, step 3's output includes GUIDs (highlighted) assigned by harvest/registry to the 3 version 1.0 products. For each, replace <i>guid</i> below with the GUID:  <pre>curl -X DELETE -v registryURL/registry/extrinsics/guid</pre></li> <li>5. Verify in browser: <a href="#">registryURL/registry-ui</a></li> <li>6. Step 2's output includes GUIDs (highlighted) assigned by harvest/registry to the 3 version 4.4 products. For each, replace <i>guid</i> below with the GUID:  <pre>curl -X DELETE -v registryURL/registry/extrinsics/guid</pre></li> <li>7. Verify in browser: <a href="#">registryURL/registry-ui</a></li> </ol>
Test Results	<p>Step 2:</p> <pre>PDS Harvest Tool Log Version          Version 1.1.0 Time             Thu, Feb 09 2012 at 01:09:13 PM Registry Location http://localhost:8080/registry Registry Package Name Harvest-Package_20120209130913 Registration Package GUID urn:uuid:9c7d80a0-b92b-4922-a3c4-87c7d2eb806e INFO: XML extractor set to the following default namespace: http://pds.nasa.gov/schema/pds4/pds/v06 INFO: [testDir/holdings/minimalImage.xml] Begin processing. INFO: [testDir/holdings/minimalImage.xml] Setting LIDVID-based association, 'urn:nasa:pds:investigation.MARS_PATHFINDER:1.0', under slot name 'has_investigation'. INFO: [testDir/holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:instrument_host.MPFL', under slot name 'has_instrument_host'. INFO: [testDir/holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:instrument.IMP__MPFL', under slot name 'has_instrument'. INFO: [testDir/holdings/minimalImage.xml] Setting LIDVID-based association, 'urn:nasa:pds:target.MARS:1.0', under slot name 'has_target'.</pre>

```

INFO: [testDir/holdings/minimalImage.xml] Captured file information for minimalImage.xml
INFO: [testDir/holdings/minimalImage.xml] Capturing file object metadata for i943630r.raw
SUCCESS: [testDir/holdings/minimalImage.xml] Successfully registered product:
TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-
V1.0::4.4
INFO: [testDir/holdings/minimalImage.xml] Product has the following GUID: urn:uuid:20b8b70c-e139-
4d54-840c-4cf7b2cb2528
SUCCESS: [testDir/holdings/minimalImage.xml] Successfully registered product:
TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-
V1.0:minimalImage.xml::4.4
INFO: [testDir/holdings/minimalImage.xml] Product has the following GUID: urn:uuid:62b9f714-85b2-
4965-b426-5c3ebd196ec6
SUCCESS: [testDir/holdings/minimalImage.xml] Successfully registered product:
TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-
V1.0:i943630r.raw::4.4
INFO: [testDir/holdings/minimalImage.xml] Product has the following GUID: urn:uuid:a3883b19-eb94-
4a76-8ddc-54e066397d5e
SUCCESS: [testDir/holdings/minimalImage.xml] Successfully registered association to
TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-
V1.0:minimalImage.xml::4.4
INFO: [testDir/holdings/minimalImage.xml] Association has the following GUID: urn:uuid:98e47a66-
728c-4602-8b8a-e247f9ad2710
SUCCESS: [testDir/holdings/minimalImage.xml] Successfully registered association to
TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-
V1.0:i943630r.raw::4.4
INFO: [testDir/holdings/minimalImage.xml] Association has the following GUID: urn:uuid:74d167f0-
eb3c-423a-a794-115d83d29172
Summary:
1 of 1 file(s) processed, 0 skipped
3 of 3 products registered.
2 of 2 associations registered, 0 skipped
End of Log
    
```

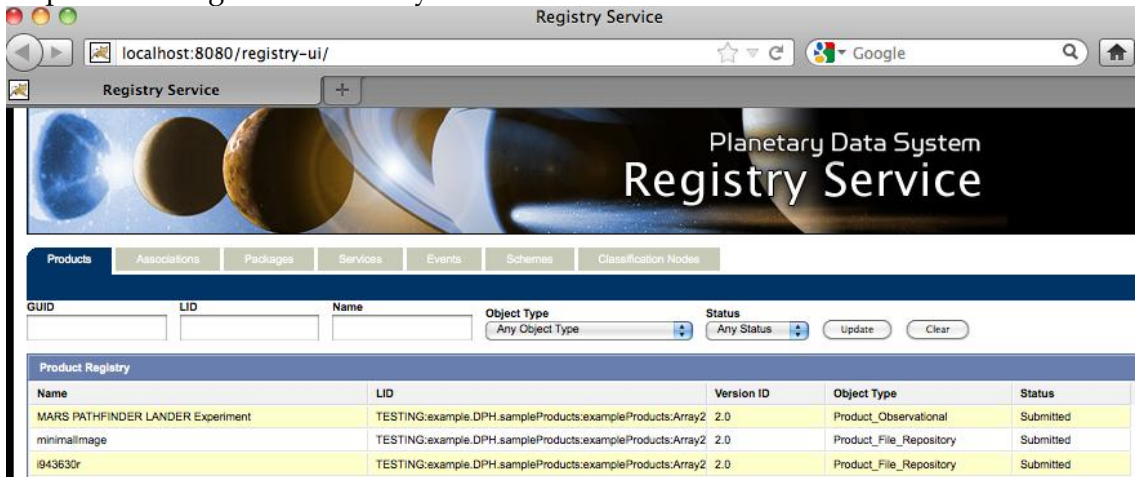
Step 3: three additional lines displayed



Step 4: For each of the 3 products to delete, output must have line "HTTP/1.1 200 OK".

```

* About to connect() to localhost port 8080 (#0)
* Trying 127.0.0.1... connected
* Connected to localhost (127.0.0.1) port 8080 (#0)
> DELETE /registry/extrinsics/urn:uuid:014bc77b-4f82-464d-a03d-9a121fc5b6e2 HTTP/1.1
> User-Agent: curl/7.19.7 (universal-apple-darwin10.0) libcurl/7.19.7 OpenSSL/0.9.8r zlib/1.2.3
> Host: localhost:8080
> Accept: */*
< HTTP/1.1 200 OK
< Server: Apache-Coyote/1.1
< Content-Type: application/xml
    
```

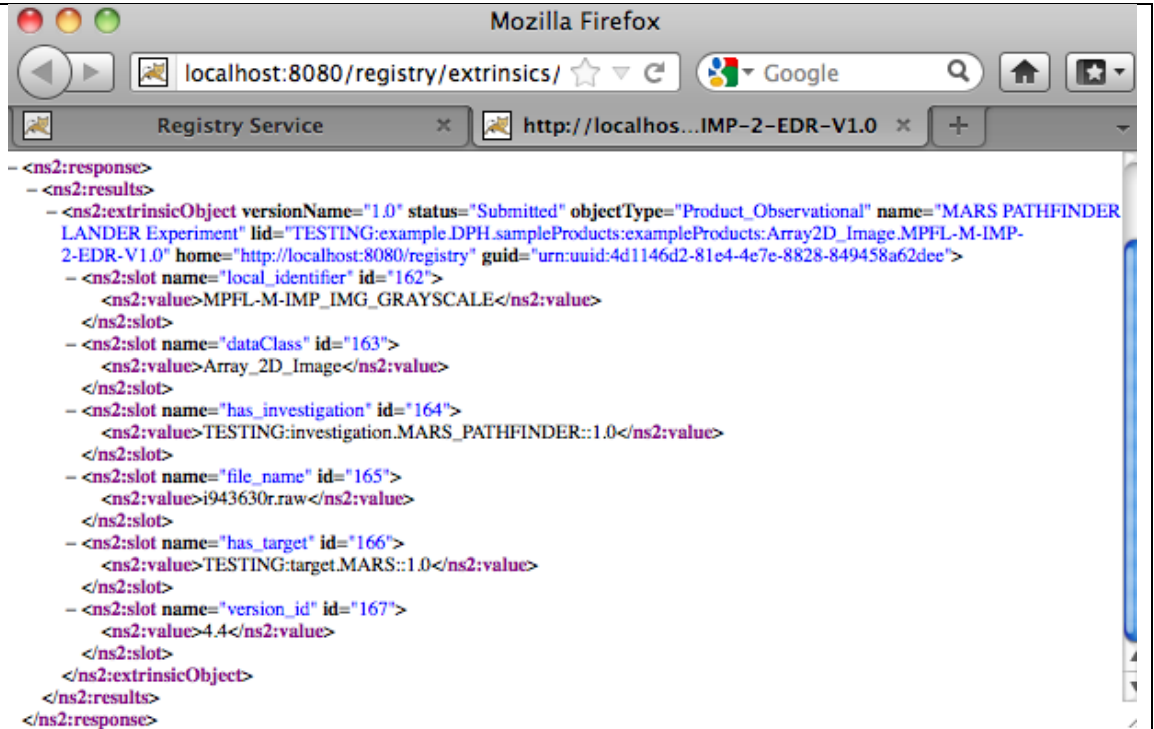
	<p>&lt; Content-Length: 0                  &lt; Date: Fri, 10 Feb 2012 17:11:57 GMT                  * Connection #0 to host localhost left intact                  * Closing connection #0</p> <p>Step 5 shows registration of only the newer version</p>  <p>Step 6 has similar output to step 4                  Step 7 shows no records with LID beginning with "TESTING"</p>
Comments	This is most likely not a bug, but the values in http://.../registry-ui's Version ID column are NOT the values from the .xml files' Identification_Area/version_id
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

Test Case ID	AATESTME.T6
Description	Harvest skips candidate products not matching configuration file
Test Steps	<ol style="list-style-type: none"> <li>1. cp testAAtestme/unharvestedDoc.xml holdings/</li> <li>2. harvest harvestOptions -c harvestPolicy.xml</li> </ol> <p>In a browser, check the registration of the 1 unsuccessful and 1 successful products:</p> <ol style="list-style-type: none"> <li>3. Verify in browser: <a href="#">registryURL/registry-ui</a></li> </ol>
Test Results	<p>Step 2: note that unharvestedDoc.xml was skipped (<b>highlighted</b>) because harvestPolicy.xml does not list its type.</p> <pre> PDS Harvest Tool Log Version          Version 1.1.0 Time             Fri, Feb 10 2012 at 10:34:45 AM Registry Location http://localhost:8080/registry Registry Package Name Harvest-Package_20120210103445 Registration Package GUID urn:uuid:9bad5e53-5bba-4745-8d8b-cf159a505a18 INFO: XML extractor set to the following default namespace: http://pds.nasa.gov/schema/pds4/pds/v06 INFO: [testDir/holdings/minimalImage.xml] Begin processing. INFO: [testDir/holdings/minimalImage.xml] Setting LIDVID-based association, 'urn:nasa:pds:investigation.MARS_PATHFINDER::1.0', under slot name 'has_investigation'. INFO: [testDir/holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:instrument_host.MPFL', under slot name 'has_instrument_host'. INFO: [testDir/holdings/minimalImage.xml] Setting LID-based association, 'urn:nasa:pds:instrument.IMP_MPFL', under slot name 'has_instrument'. INFO: [testDir/holdings/minimalImage.xml] Setting LIDVID-based association, 'urn:nasa:pds:target.MARS::1.0', under slot name 'has_target'. INFO: [testDir/holdings/minimalImage.xml] Captured file information for minimalImage.xml INFO: [testDir/holdings/minimalImage.xml] Capturing file object metadata for i943630r.raw SUCCESS: [testDir/holdings/minimalImage.xml] Successfully registered product: TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR- V1.0::4.4                 </pre>

	<p>INFO: [testDir/holdings/minimalImage.xml] Product has the following GUID: urn:uuid:55c0e88a-e472-430d-be08-28ebc47c3615                  SUCCESS: [testDir/holdings/minimalImage.xml] Successfully registered product:                  TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-V1.0:minimalImage.xml:4.4                  INFO: [testDir/holdings/minimalImage.xml] Product has the following GUID: urn:uuid:9cc8bfec-a437-4ec1-8ca3-e0dfe9fe17d4                  SUCCESS: [testDir/holdings/minimalImage.xml] Successfully registered product:                  TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-V1.0:i943630r.raw:4.4                  INFO: [testDir/holdings/minimalImage.xml] Product has the following GUID: urn:uuid:fc353591-6943-4d56-9462-db310717e059                  INFO: [testDir/holdings/unharvestedDoc.xml] Begin processing.                  SKIP: [testDir/holdings/unharvestedDoc.xml] 'Product_Document' is not an object type found in the policy file.                  SUCCESS: [testDir/holdings/minimalImage.xml] Successfully registered association to                  TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-V1.0:minimalImage.xml:4.4                  INFO: [testDir/holdings/minimalImage.xml] Association has the following GUID: urn:uuid:62247ebc-e839-4dd9-885c-8e5037b166f7                  SUCCESS: [testDir/holdings/minimalImage.xml] Successfully registered association to                  TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-V1.0:i943630r.raw:4.4                  INFO: [testDir/holdings/minimalImage.xml] Association has the following GUID: urn:uuid:c6f0ec53-2544-4ac4-bf26-8e2737a96881                  Summary:                  1 of 1 file(s) processed, 1 skipped                  3 of 3 products registered.                  2 of 2 associations registered, 0 skipped                  End of Log</p> <p>Step 3: shows no LID with (from files unharvestedDoc.xml)                  TESTING:example.DPH.sampleProducts:exampleProducts:DocumentProduct.PHX-M-MECA-4-NIRDR-V1.0</p>
Comments	
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

Test Case ID	AATESTME.T7
Description	Registry relates artifacts via (LID-based) association.
Test Steps	<ol style="list-style-type: none"> <li>1. Note whether minimalImage.xml was previously registered:  <i>registryURL/registry/extrinsics/logicals/TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-V1.0</i></li> <li>2. Edit holdings/minimalImage.xml to:                         <ol style="list-style-type: none"> <li>a. uncomment the two Observing_System tags.</li> <li>b. set &lt;version_id&gt; to 5.5</li> </ol> </li> <li>3. harvest <i>harvestOptions -c harvestPolicy.xml</i></li> <li>4. Repeat step 1. This time note that the new version has slots for the two LID-based associations "has_instrument" and "has_instrument_host"</li> </ol>
Test Results	Step 1: If minimalImage.xml was registered:





```

- <ns2:response>
- <ns2:results>
- <ns2:extrinsicObject versionName="1.0" status="Submitted" objectType="Product_Observational" name="MARS PATHFINDER
LANDER Experiment" lid="TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-
2-EDR-V1.0" home="http://localhost:8080/registry" guid="urn:uuid:4d1146d2-81e4-4e7e-8828-849458a62dec">
- <ns2:slot name="local_identifier" id="162">
  <ns2:value>MPFL-M-IMP_IMG_GRAYSCALE</ns2:value>
</ns2:slot>
- <ns2:slot name="dataClass" id="163">
  <ns2:value>Array_2D_Image</ns2:value>
</ns2:slot>
- <ns2:slot name="has_investigation" id="164">
  <ns2:value>TESTING:investigation.MARS_PATHFINDER::1.0</ns2:value>
</ns2:slot>
- <ns2:slot name="file_name" id="165">
  <ns2:value>i943630r.raw</ns2:value>
</ns2:slot>
- <ns2:slot name="has_target" id="166">
  <ns2:value>TESTING:target.MARS::1.0</ns2:value>
</ns2:slot>
- <ns2:slot name="version_id" id="167">
  <ns2:value>4.4</ns2:value>
</ns2:slot>
</ns2:extrinsicObject>
</ns2:results>
</ns2:response>

```

Step 3: note the two new associations to instrument and instrument\_host (highlighted)

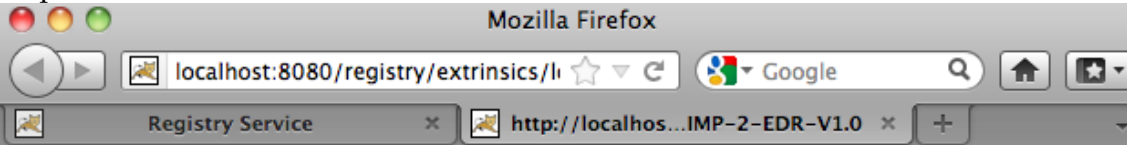
```

PDS Harvest Tool Log
Version          Version 1.1.0
Time             Fri, Feb 10 2012 at 02:28:25 PM
Registry Location http://localhost:8080/registry
Registry Package Name Harvest-Package_20120210142825
Registration Package GUID urn:uuid:349c4c4e-6897-4ba8-911c-b95de75b2e5c
INFO: XML extractor set to the following default namespace:
http://pds.nasa.gov/schema/pds4/pds/v06
INFO: [testDir/holdings/minimalImage.xml] Begin processing.
INFO: [testDir/holdings/minimalImage.xml] Setting LIDVID-based association,
'TESTING:investigation.MARS_PATHFINDER::1.0', under slot name 'has_investigation'.
INFO: [testDir/holdings/minimalImage.xml] Setting LID-based association,
'TESTING:instrument_host.MPFL', under slot name 'has_instrument_host'.
INFO: [testDir/holdings/minimalImage.xml] Setting LID-based association,
'TESTING:instrument.IMP__MPFL', under slot name 'has_instrument'.
INFO: [testDir/holdings/minimalImage.xml] Setting LIDVID-based association,
'TESTING:target.MARS::1.0', under slot name 'has_target'.
INFO: [testDir/holdings/minimalImage.xml] Captured file information for minimalImage.xml
INFO: [testDir/holdings/minimalImage.xml] Capturing file object metadata for i943630r.raw
SUCCESS: [testDir/holdings/minimalImage.xml] Successfully registered product:
TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-
V1.0::5.5
INFO: [testDir/holdings/minimalImage.xml] Product has the following GUID: urn:uuid:5b8fb2dc-2fcc-
4014-973c-ca34900dfd48
SUCCESS: [testDir/holdings/minimalImage.xml] Successfully registered product:
TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-
V1.0:minimalImage.xml::5.5
INFO: [testDir/holdings/minimalImage.xml] Product has the following GUID: urn:uuid:b6a96168-5fd8-
434a-9a14-bf319a5fba36
SUCCESS: [testDir/holdings/minimalImage.xml] Successfully registered product:
TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-
V1.0:i943630r.raw::5.5
INFO: [testDir/holdings/minimalImage.xml] Product has the following GUID: urn:uuid:4c9fca24-97e5-
4ee5-a8db-00bb2b06ad5c
INFO: [testDir/holdings/unharvestedDoc.xml] Begin processing.
SKIP: [testDir/holdings/unharvestedDoc.xml] 'Product_Document' is not an object type found in the
policy file.
SUCCESS: [testDir/holdings/minimalImage.xml] Successfully registered association to
TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-
V1.0:minimalImage.xml::5.5
INFO: [testDir/holdings/minimalImage.xml] Association has the following GUID: urn:uuid:5c6c9950-

```

09ec-4f69-bc90-70dcf781d655  
 SUCCESS: [testDir/holdings/minimalImage.xml] Successfully registered association to  
 TESTING:example.DPH.sampleProducts:exampleProducts:Array2D\_Image.MPFL-M-IMP-2-EDR-  
 V1.0:i943630r.raw::5.5  
 INFO: [testDir/holdings/minimalImage.xml] Association has the following GUID: urn:uuid:82448c26-  
 03ba-4b15-ade6-ed04352dc6a4  
 Summary:  
 1 of 1 file(s) processed, 1 skipped  
 3 of 3 products registered.  
 2 of 2 associations registered, 0 skipped  
 End of Log

Step 4:



```

- <ns2:response>
- <ns2:results>
- <ns2:extrinsicObject versionName="1.0" status="Submitted" objectType="Product_Observational" name="MARS PATHFINDER LANDER Experiment" lid="TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-V1.0" home="http://localhost:8080/registry" guid="urn:uuid:4d1146d2-81e4-4e7e-8828-849458a62dec">
- <ns2:slot name="local_identifier" id="162">
  <ns2:value>MPFL-M-IMP_IMG_GRAYSCALE</ns2:value>
</ns2:slot>
- <ns2:slot name="dataClass" id="163">
  <ns2:value>Array_2D_Image</ns2:value>
</ns2:slot>
- <ns2:slot name="has_investigation" id="164">
  <ns2:value>TESTING:investigation.MARS_PATHFINDER::1.0</ns2:value>
</ns2:slot>
- <ns2:slot name="file_name" id="165">
  <ns2:value>i943630r.raw</ns2:value>
</ns2:slot>
- <ns2:slot name="has_target" id="166">
  <ns2:value>TESTING:target.MARS::1.0</ns2:value>
</ns2:slot>
- <ns2:slot name="version_id" id="167">
  <ns2:value>4.4</ns2:value>
</ns2:slot>
</ns2:extrinsicObject>
- <ns2:extrinsicObject versionName="2.0" status="Submitted" objectType="Product_Observational" name="MARS PATHFINDER LANDER Experiment" lid="TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-V1.0" home="http://localhost:8080/registry" guid="urn:uuid:5b8fb2dc-2fcc-4014-973c-ca34900dfd48">
- <ns2:slot name="local_identifier" id="193">
  <ns2:value>MPFL-M-IMP_IMG_GRAYSCALE</ns2:value>
</ns2:slot>
- <ns2:slot name="has_instrument_host" id="194">
  <ns2:value>TESTING:instrument_host.MPFL</ns2:value>
</ns2:slot>
- <ns2:slot name="version_id" id="195">
  <ns2:value>5.5</ns2:value>
</ns2:slot>
- <ns2:slot name="dataClass" id="196">
  <ns2:value>Array_2D_Image</ns2:value>
</ns2:slot>
- <ns2:slot name="has_investigation" id="197">
  <ns2:value>TESTING:investigation.MARS_PATHFINDER::1.0</ns2:value>
</ns2:slot>
- <ns2:slot name="file_name" id="198">
  <ns2:value>i943630r.raw</ns2:value>
</ns2:slot>
- <ns2:slot name="has_instrument" id="199">
  <ns2:value>TESTING:instrument.IMP__MPFL</ns2:value>
</ns2:slot>
- <ns2:slot name="has_target" id="200">
  <ns2:value>TESTING:target.MARS::1.0</ns2:value>
</ns2:slot>
</ns2:extrinsicObject>
</ns2:results>
</ns2:response>
    
```

Comments	
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

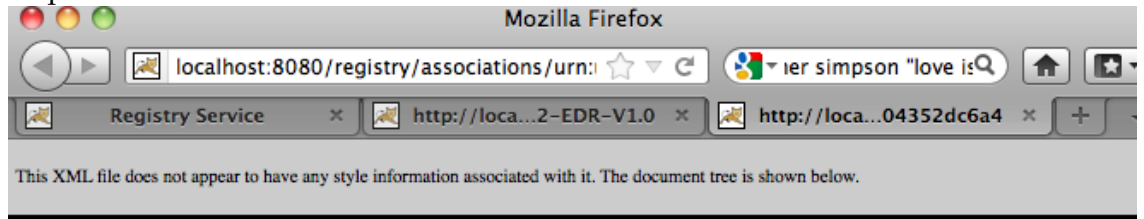
Test Case ID	AATESTME.T8
Description	Harvest checks for previous registration.
Test Steps	harvest <i>harvestOptions</i> -c harvestPolicy.xml
Test Results	<p>PDS Harvest Tool Log  Version Version 1.1.0  Time Fri, Feb 10 2012 at 02:34:27 PM  Registry Location http://localhost:8080/registry  Registry Package Name Harvest-Package_20120210143427  Registration Package GUID urn:uuid:0033cfec-bdbf-4b36-a8ed-0408bea7531b  INFO: XML extractor set to the following default namespace:  http://pds.nasa.gov/schema/pds4/pds/v06  INFO: [<i>testDir/holdings/minimalImage.xml</i>] Begin processing.  INFO: [<i>testDir/holdings/minimalImage.xml</i>] Setting LIDVID-based association,  'TESTING:investigation.MARS_PATHFINDER::1.0', under slot name 'has_investigation'.  INFO: [<i>testDir/holdings/minimalImage.xml</i>] Setting LID-based association,  'TESTING:instrument_host.MPFL', under slot name 'has_instrument_host'.  INFO: [<i>testDir/holdings/minimalImage.xml</i>] Setting LID-based association,  'TESTING:instrument.IMP__MPFL', under slot name 'has_instrument'.  INFO: [<i>testDir/holdings/minimalImage.xml</i>] Setting LIDVID-based association,  'TESTING:target.MARS::1.0', under slot name 'has_target'.  INFO: [<i>testDir/holdings/minimalImage.xml</i>] Captured file information for minimalImage.xml  INFO: [<i>testDir/holdings/minimalImage.xml</i>] Capturing file object metadata for i943630r.raw  FAILURE: [<i>testDir/holdings/minimalImage.xml</i>] Product already exists:  TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-  V1.0::5.5  INFO: [<i>testDir/holdings/unharvestedDoc.xml</i>] Begin processing.  SKIP: [<i>testDir/holdings/unharvestedDoc.xml</i>] 'Product_Document' is not an object type found in the  policy file.  Summary:  1 of 1 file(s) processed, 1 skipped  0 of 1 products registered.  0 of 0 associations registered, 0 skipped  End of Log</p> <p>Notice that no products (and no associations) were registered.</p>
Comments	
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

Test Case ID	AATESTME.T9
Description	(Skip this test if test 3 of AATESTME.T7 reported “0 of 0 associations registered”.) 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"> <li>1. AATESTME.T7’s Test Results, step 4’s output includes the GUID (<b>highlighted</b>) of the association between the data product and the file. Replace <i>guid</i> below with the GUID  <code>registryURL/registry/associations/guid</code></li> <li>2. <code>curl -X DELETE -v <a href="#">registryURL/registry/associations/guid</a></code></li> <li>3. Repeat step 1</li> </ol> <p>Another way to delete an association is to delete its source object.</p> <ol style="list-style-type: none"> <li>4. Edit <code>holdings/minimalImage.xml</code>; change <code>&lt;version_id&gt;</code> to 6.6</li> <li>5. <code>harvest harvestOptions -c harvestPolicy.xml</code></li> <li>6. View association: use the GUID (<b>highlighted</b>) of the association registered in step 5: <a href="#">registryURL/registry/associations/guid</a></li> </ol>

7. Delete association's source object: use the GUID (**highlighted**) of the product registered in step 5, which was also the value of sourceObject in step 6:  
`curl -v -X DELETE registryURL/registry/extrinsics/guid`
8. Repeat step 6. Association should be gone.

Test Results

Step 1:

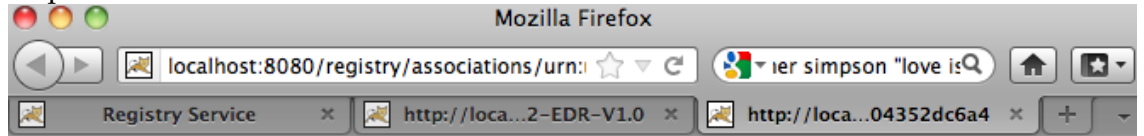


```
-<ns2:association associationType="has_file" targetObject="urn:uuid:4c9fca24-97e5-4ee5-a8db-00bb2b06ad5c" sourceObject="urn:uuid:5b8fb2dc-2fcc-4014-973c-ca34900dfd48" versionName="1.0" status="Submitted" objectType="Association" lid="urn:uuid:af698c4a-eb52-460c-beb7-79bc66150b34" home="http://localhost:8080/registry" guid="urn:uuid:82448c26-03ba-4b15-ade6-ed04352dc6a4">
- <ns2:slot name="verified" id="219">
  <ns2:value>true</ns2:value>
</ns2:slot>
</ns2:association>
```

Step 2: benign output, with "HTTP/1.1 200 OK" somewhere in the middle:

```
* About to connect() to localhost port 8080 (#0)
* Trying 127.0.0.1... connected
* Connected to localhost (127.0.0.1) port 8080 (#0)
> DELETE /registry/associations/urn:uuid:82448c26-03ba-4b15-ade6-ed04352dc6a4 HTTP/1.1
> User-Agent: curl/7.19.7 (universal-apple-darwin10.0) libcurl/7.19.7 OpenSSL/0.9.8r zlib/1.2.3
> Host: localhost:8080
> Accept: */*
< HTTP/1.1 200 OK
< Server: Apache-Coyote/1.1
< Content-Length: 0
< Date: Fri, 10 Feb 2012 22:57:19 GMT
* Connection #0 to host localhost left intact
* Closing connection #0
```

Step 3:



```
XML Parsing Error: syntax error
Location: http://localhost:8080/registry/associations/urn:uuid:82448c26-03ba-4b15-ade6-ed04352dc6a4
Line Number 1, Column 1:

Object not found urn:uuid:82448c26-03ba-4b15-ade6-ed04352dc6a4
^
```

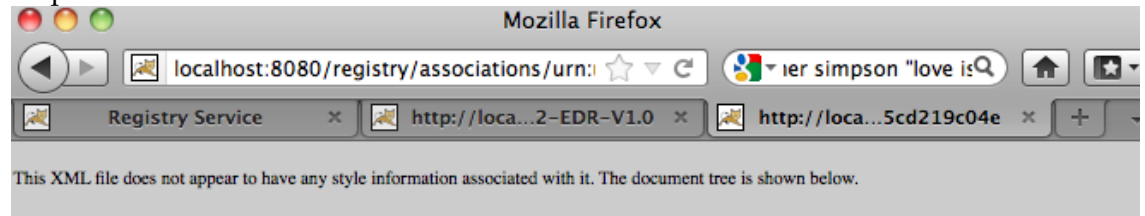
Step 5:

```
PDS Harvest Tool Log
Version          Version 1.1.0
Time             Fri, Feb 10 2012 at 02:58:26 PM
Registry Location http://localhost:8080/registry
Registry Package Name Harvest-Package_20120210145826
Registration Package GUID urn:uuid:e0a3acd5-6b4b-49a1-8d42-e90ac90eca4a
INFO: XML extractor set to the following default namespace:
http://pds.nasa.gov/schema/pds4/pds/v06
INFO: [testDir/holdings/minimalImage.xml] Begin processing.
INFO: [testDir/holdings/minimalImage.xml] Setting LIDVID-based association,
'TESTING:investigation.MARS_PATHFINDER::1.0', under slot name 'has_investigation'.
INFO: [testDir/holdings/minimalImage.xml] Setting LID-based association,
'TESTING:instrument_host.MPFL', under slot name 'has_instrument_host'.
INFO: [testDir/holdings/minimalImage.xml] Setting LID-based association,
'TESTING:instrument.IMP__MPFL', under slot name 'has_instrument'.
INFO: [testDir/holdings/minimalImage.xml] Setting LIDVID-based association,
'TESTING:target.MARS::1.0', under slot name 'has_target'.
```

```

INFO: [testDir/holdings/minimalImage.xml] Captured file information for minimalImage.xml
INFO: [testDir/holdings/minimalImage.xml] Capturing file object metadata for i943630r.raw
SUCCESS: [testDir/holdings/minimalImage.xml] Successfully registered product:
TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-
V1.0::6.6
INFO: [testDir/holdings/minimalImage.xml] Product has the following GUID: urn:uuid:7f2d0aae-e039-
4244-8778-d532a0b81dcc
SUCCESS: [testDir/holdings/minimalImage.xml] Successfully registered product:
TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-
V1.0:minimalImage.xml::6.6
INFO: [testDir/holdings/minimalImage.xml] Product has the following GUID: urn:uuid:3715b985-ce73-
4ad3-9ed5-f24cc1b8621b
SUCCESS: [testDir/holdings/minimalImage.xml] Successfully registered product:
TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-
V1.0:i943630r.raw::6.6
INFO: [testDir/holdings/minimalImage.xml] Product has the following GUID: urn:uuid:751e6837-3f0b-
4f3e-b7ae-3ae34cd12bc1
INFO: [testDir/holdings/unharvestedDoc.xml] Begin processing.
SKIP: [testDir/holdings/unharvestedDoc.xml] 'Product_Document' is not an object type found in the
policy file.
SUCCESS: [testDir/holdings/minimalImage.xml] Successfully registered association to
TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-
V1.0:minimalImage.xml::6.6
INFO: [testDir/holdings/minimalImage.xml] Association has the following GUID: urn:uuid:e653eb17-
a324-4d0b-a0e7-989ff7a5935c
SUCCESS: [testDir/holdings/minimalImage.xml] Successfully registered association to
TESTING:example.DPH.sampleProducts:exampleProducts:Array2D_Image.MPFL-M-IMP-2-EDR-
V1.0:i943630r.raw::6.6
INFO: [testDir/holdings/minimalImage.xml] Association has the following GUID: urn:uuid:fdfa42c7-
680b-462c-befb-7d5cd219c04e
Summary:
1 of 1 file(s) processed, 1 skipped
3 of 3 products registered.
2 of 2 associations registered, 0 skipped
End of Log
    
```

Step 6:



```


-<ns2:association associationType="has_file" targetObject="urn:uuid:751e6837-3f0b-4f3e-b7ae-3ae34cd12bc1" sourceObject="urn:uuid:7f2d0aae-
e039-4244-8778-d532a0b81dcc" versionName="1.0" status="Submitted" objectType="Association" lid="urn:uuid:a91e37b9-a8a9-40bc-
ac84-45d70448e7ab" home="http://localhost:8080/registry" guid="urn:uuid:fdfa42c7-680b-462c-befb-7d5cd219c04e">
  -<ns2:slot name="verified" id="251">
    <ns2:value>true</ns2:value>
  </ns2:slot>
</ns2:association>
    
```

Step 7:

```

* About to connect() to localhost port 8080 (#0)
* Trying 127.0.0.1... connected
* Connected to localhost (127.0.0.1) port 8080 (#0)
> DELETE /registry/extrinsics/urn:uuid:7f2d0aae-e039-4244-8778-d532a0b81dcc HTTP/1.1
> User-Agent: curl/7.19.7 (universal-apple-darwin10.0) libcurl/7.19.7 OpenSSL/0.9.8r zlib/1.2.3
> Host: localhost:8080
> Accept: */*
< HTTP/1.1 200 OK
< Server: Apache-Coyote/1.1
< Content-Type: application/xml
< Content-Length: 0
< Date: Fri, 10 Feb 2012 23:03:35 GMT
* Connection #0 to host localhost left intact
* Closing connection #0
    
```

Step 8:

	
Comments	
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

Test Case ID	CTLG.T1
Description	Compare a catalog submission, both file to file and directory to directory
Test Steps	<ol style="list-style-type: none"> <li>1. catalog -mcompare testCatalog/CORPWS_0164 testCatalog/CORPWS_lite</li> <li>2. catalog -mcompare testCatalog/CORPWS_lite/RAWDS.CAT testCatalog/diff</li> </ol>
Test Results	<p>Step 1:</p> <pre> PDS Catalog Ingest Tool Report Configuration: Version      Version 1.2.0 Date        Tue, Feb 28 2012 at 12:42:01 AM Parameters: Mode        compare Target(s) Source = file: testDir/testCatalog/CORPWS_0164/ Target = file: testDir/testCatalog/CORPWS_lite/ Directory Recursion true Severity Level  WARNING Compare Details: SAME: file: testDir/testCatalog/CORPWS_lite/INSTHOST.CAT SAME: file: testDir/testCatalog/CORPWS_lite/KEYDS.CAT SAME: file: testDir/testCatalog/CORPWS_lite/LRFULLDS.CAT SAME: file: testDir/testCatalog/CORPWS_lite/MISSION.CAT SAME: file: testDir/testCatalog/CORPWS_lite/PERSON.CAT SAME: file: testDir/testCatalog/CORPWS_lite/PROJREF.CAT SAME: file: testDir/testCatalog/CORPWS_lite/RAWDS.CAT SAME: file: testDir/testCatalog/CORPWS_lite/REF.CAT SAME: file: testDir/testCatalog/CORPWS_lite/RPWSINST.CAT DIFFERENT: file: testDir/testCatalog/CORPWS_lite/VOLDESC.CAT   line 80: Pointer "DATA_SET_CATALOG" has different value than source.   Source: line 80 of file: testDir/testCatalog/CORPWS_0164/VOLDESC.CAT   80c80   &lt; {KEYDS.CAT, RAWDS.CAT, LRFULLDS.CAT, WBFULLDS.CAT, WFFULLDS.CAT}   ----   &gt; KEYDS.CAT   line 81: Pointer "REFERENCE_CATALOG" has different value than source.   Source: line 86 of file: testDir/testCatalog/CORPWS_0164/VOLDESC.CAT   86c81   &lt; {REF.CAT, PROJREF.CAT}   ----   &gt; REF.CAT SAME: file: testDir/testCatalog/CORPWS_lite/WBFULLDS.CAT SAME: file: testDir/testCatalog/CORPWS_lite/WFFULLDS.CAT Summary:         </pre>

	<pre> 12 of 12 validated, 0 skipped 11 of 12 passed End of Report  Step 2: PDS Catalog Ingest Tool Report Configuration: Version      Version 1.2.0 Date        Tue, Feb 28 2012 at 12:55:06 AM Parameters: Mode         compare Target(s) Source = file: testDir/testCatalog/CORPWS_0164/RAWDS.CAT Target = file: testDir/testCatalog/diff Directory Recursion true Severity Level WARNING Compare Details: DIFFERENT: file: testDir/testCatalog/diff line 54: Element "DATA_SET_DESC" has different value than source. Source: line 54 of file: testDir/testCatalog/CORPWS_0164/RAWDS.CAT 124,128c124,128 &lt; kernels can be used with the SPICE toolkit to convert from the &lt; spacecraft frame to virtually any frame which may be of use in &lt; analyzing these data. However, for many purposes, the wave &lt; amplitudes are extremely useful and may be entirely adequate with no &lt; coordinate transformations at all. ---- &gt; kernels EXTRAWORDHERE can be used with the SPICE toolkit to convert from &gt; the spacecraft frame to virtually any frame which may be of use &gt; in analyzing these data. However, for many purposes, the &gt; wave amplitudes are extremely useful and may be entirely adequate &gt; with no coordinate transformations at all.  Summary: 1 of 1 validated, 0 skipped 0 of 1 passed End of Report </pre>
Comments	<p>Catalog -mcompare does well but could be better. In step 2, the second file has only 1 extra token, which then causes a cascade of different line breaks. However, the tool shows all lines of the difference. It would be better to show only the different token plus a few tokens around it.</p>
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

Test Case ID	CTLG.T2
Description	Validate a catalog submission.
Test Steps	catalog -mvalidate -d testCatalog/pdsdd.full -t testCatalog/LRO_diviner/
Test Results	<pre> catalog -mvalidate -d testCatalog/pdsdd.full -t testCatalog/LRO_diviner/ PDS Catalog Ingest Tool Report Configuration: Version      Version 1.2.0 Date        Tue, Feb 28 2012 at 01:01:11 AM Parameters: Mode         validate Target       file: testDir/testCatalog/LRO_diviner/ Directory Recursion true Dictionary File(s) [/PDS/pdsdd.full] Severity Level WARNING Aliasing Enabled false Validation Details: PASS: file: testDir/testCatalog/LRO_diviner/dsmap.cat </pre>

	<p>PASS: file: <i>testDir/testCatalog/LRO_diviner/dsmap_polar.cat</i>  PASS: file: <i>testDir/testCatalog/LRO_diviner/gdrds.cat</i>  PASS: file: <i>testDir/testCatalog/LRO_diviner/inst.cat</i>  PASS: file: <i>testDir/testCatalog/LRO_diviner/insthost.cat</i>  PASS: file: <i>testDir/testCatalog/LRO_diviner/mission.cat</i>  PASS: file: <i>testDir/testCatalog/LRO_diviner/person.cat</i>  PASS: file: <i>testDir/testCatalog/LRO_diviner/prpds.cat</i>  PASS: file: <i>testDir/testCatalog/LRO_diviner/rdrds.cat</i>  PASS: file: <i>testDir/testCatalog/LRO_diviner/ref.cat</i>  FAIL: file: <i>testDir/testCatalog/LRO_diviner/voldesc.cat</i>  Begin Fragment: file: <i>testDir/testCatalog/LRO_diviner/INSTHOST.CAT</i>  WARNING The label fragment, "INSTHOST.CAT", should not contain a PDS_VERSION_ID.  End Fragment: file: <i>testDir/testCatalog/LRO_diviner/INSTHOST.CAT</i>  Begin Fragment: file: <i>testDir/testCatalog/LRO_diviner/INST.CAT</i>  WARNING The label fragment, "INST.CAT", should not contain a PDS_VERSION_ID.  End Fragment: file: <i>testDir/testCatalog/LRO_diviner/INST.CAT</i>  Begin Fragment: file: <i>testDir/testCatalog/LRO_diviner/PERSON.CAT</i>  WARNING The label fragment, "PERSON.CAT", should not contain a PDS_VERSION_ID.  End Fragment: file: <i>testDir/testCatalog/LRO_diviner/PERSON.CAT</i>  Begin Fragment: file: <i>testDir/testCatalog/LRO_diviner/MISSION.CAT</i>  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: <i>testDir/testCatalog/LRO_diviner/MISSION.CAT</i>  Begin Fragment: file: <i>testDir/testCatalog/LRO_diviner/REF.CAT</i>  WARNING The label fragment, "REF.CAT", should not contain a PDS_VERSION_ID.  End Fragment: file: <i>testDir/testCatalog/LRO_diviner/REF.CAT</i>  Begin Fragment: file: <i>testDir/testCatalog/LRO_diviner/GDRDS.CAT</i>  WARNING The label fragment, "GDRDS.CAT", should not contain a PDS_VERSION_ID.  End Fragment: file: <i>testDir/testCatalog/LRO_diviner/GDRDS.CAT</i>  Referential Integrity Details:  PASS: Instrument Host  Parent File(s): [<i>insthost.cat</i>]  Begin checking children  End checking children  PASS: Mission  Parent File(s): [<i>mission.cat</i>]  Begin checking children  End checking children  PASS: Data Set  Parent File(s): [<i>gdrds.cat, prpds.cat, rdrds.cat</i>]  Begin checking children  End checking children  PASS: Instrument  Parent File(s): [<i>inst.cat</i>]  Begin checking children  End checking children  PASS: Personnel  Parent File(s): [<i>person.cat</i>]  Begin checking children  End checking children  FAIL: Reference  Parent File(s): [<i>ref.cat</i>]  Begin checking children  <i>dsmap.cat</i>: "REFERENCE_KEY_ID = SEIDELMANNETAL2002" is not found in a(n) "<i>ref.cat</i>".  <i>dsmap.cat</i>: "REFERENCE_KEY_ID = SNYDER1987" is not found in a(n) "<i>ref.cat</i>".  <i>dsmap_polar.cat</i>: "REFERENCE_KEY_ID = SEIDELMANNETAL2002" is not found in a(n) "<i>ref.cat</i>".  <i>dsmap_polar.cat</i>: "REFERENCE_KEY_ID = SNYDER1987" is not found in a(n) "<i>ref.cat</i>".  End checking children  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</p>
--	--



	10 of 11 passed End of Report
Comments	When validating voldesc.cat, catalog -mvalidate reports that the label fragment, e.g. file DATASET.CAT, "should not contain a PDS_VERSION_ID". Of course, such files must have PDS_VERSION_ID. This is a problem carried over from PDS3.
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

Test Case ID	CTLG.T3
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"> <li>• The registry resides at <a href="https://pdstest.jpl.nasa.gov:443/registry">https://pdstest.jpl.nasa.gov:443/registry</a></li> <li>• The administrator of the registry provides:             <ul style="list-style-type: none"> <li>○ a keystore (in this example, the file is /somewhere/keystore)</li> <li>○ a keystore password (e.g. hellopds)</li> <li>○ URL for the registry (<a href="https://pdstest.registry.jpl.nasa.gov:443">https://pdstest.registry.jpl.nasa.gov:443</a>)</li> <li>○ URL for the storage service (<a href="http://pdstest.jpl.nasa.gov:9100">http://pdstest.jpl.nasa.gov:9100</a>)</li> <li>○ URL for the transport serv (<a href="http://pdstest.jpl.nasa.gov:80/cas-product">http://pdstest.jpl.nasa.gov:80/cas-product</a>)</li> <li>○ username/password for the security service (rchen/new4rchen)</li> </ul> </li> <li>• The keystore has been copied/moved to /somewhere/keystore</li> <li>• In the local script catalog (or catalog.bat), the java command has parameters             <ul style="list-style-type: none"> <li>○ -Dpds.registry="https://pdstest.registry.jpl.nasa.gov:443/registry"</li> <li>○ -Dpds.security.keystore="/somewhere/keystore"</li> </ul> </li> <li>• To simplify the command-line, create a configuration file named config:             <pre> citool.mode      = ingest citool.user      = rchen citool.pass      = new4rchen citool.serverUrl = http://pdstest.jpl.nasa.gov:9100 citool.transportUrl = http://pdstest.jpl.nasa.gov:80/cas-product citool.keypass   = hellopds citool.verbose   = 1             </pre> </li> </ul> <ol style="list-style-type: none"> <li>1. catalog -cconfig -t testCatalog/CORPWS_lite/ -r ctlg1.out</li> <li>2. In a browser: <a href="https://pdstest.jpl.nasa.gov/registry-ui">https://pdstest.jpl.nasa.gov/registry-ui</a></li> <li>3. (optional) to better see the results of future tests, delete the products just registered by finding every GUID in ctlg1.out, then deleting each one via:             <pre> curl -X DELETE -v -urchen:new4rchen -k https://pdstest.jpl.nasa.gov:443/registry/extrinsics/&lt;guid&gt;             </pre> </li> <li>4. catalog -cconfig -t testCatalog/CORPWS_0164/ -r ctlg2.out</li> <li>5. catalog -cconfig -t testCatalog/PPIREF/ -r ctlg3.out              catalog -cconfig -t testCatalog/PPIREF/ppiref.cat -r ctlg3.out</li> <li>6. catalog -cconfig -t testCatalog/MPC_review/ -r ctlg4.out</li> <li>7. catalog -cconfig -t testCatalog/MPC_lite/ -r ctlg5.out</li> <li>8. In a browser: <a href="https://pdstest.jpl.nasa.gov/registry-ui">https://pdstest.jpl.nasa.gov/registry-ui</a></li> <li>9. (optional) to better see the results of future tests, delete the products just registered by finding every GUID in ctlg1.out, then deleting each one via:             <pre> curl -X DELETE -v -urchen:new4rchen -k             </pre> </li> </ol>

- https://pdstest.jpl.nasa.gov:443/registry/extrinsics/<guid>
10. catalog -cconfig -t testCatalog/LRO\_diviner/ -r ctlg6.out
  11. mv testCatalog/LRO\_diviner/dsmap\_polar.cat testCatalog/LRO\_diviner/x
  12. mv testCatalog/LRO\_diviner/dsmap.cat testCatalog/LRO\_diviner/y
  13. catalog -cconfig -t testCatalog/LRO\_diviner/ -r ctlg6.out
  14. In a browser: https://pdstest.jpl.nasa.gov/registry-ui
  15. (optional) to better see the results of future tests, delete the products just registered by finding every GUID in ctlg1.out, then deleting each one via:  
 curl -X DELETE -v -urthen:new4rchen -k  
 https://pdstest.jpl.nasa.gov:443/registry/extrinsics/<guid>

Test Results

Step 2:

The screenshot shows a web browser window titled 'Registry Service' with the URL 'https://pdstest.jpl.nasa.gov/registry-ui/'. The page has 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', and 'Name', and dropdowns for 'Object Type' (set to 'Any Object Type') and 'Status' (set to 'Any Status'). There are 'Update' and 'Clear' buttons. The main content is a table titled 'Product Registry' with columns for Name, LID, Version ID, Object Type, and Status.

Name	LID	Version ID	Object Type	Status
PERSON	CORPWS_0164:PERSON.CAT	1.0	Product_File_Repository	Submitted
PROJREF	CORPWS_0164:PROJREF.CAT	1.0	Product_File_Repository	Submitted
REF	CORPWS_0164:REF.CAT	1.0	Product_File_Repository	Submitted
VOLDESC	urn:nasa:pds:volume.CORPWS_0164:VOLDES	1.0	Product_File_Repository	Submitted
CASSINI-HUYGENS	urn:nasa:pds:mission.CASSINI-HUYGENS	1.0	Product_Mission_PDS3	Unknown
INSTHOST	urn:nasa:pds:instrument_host.CO:INSTHOST.C	1.0	Product_File_Repository	Submitted
CO-V/E/J/S/SS-RPWS-3-RDR-LRFULL-V1.0	urn:nasa:pds:data_set.CO-V/E/J/S/SS-RPWS-3	1.0	Product_Data_Set_PDS3	Unknown
WBFULLDS	urn:nasa:pds:data_set.CO-V/E/J/S/SS-RPWS-2	1.0	Product_File_Repository	Submitted
LRFULLDS	urn:nasa:pds:data_set.CO-V/E/J/S/SS-RPWS-3	1.0	Product_File_Repository	Submitted
CO-V/E/J/S/SS-RPWS-2-REFDR-WBRFULL-V1.0	urn:nasa:pds:data_set.CO-V/E/J/S/SS-RPWS-2	1.0	Product_Data_Set_PDS3	Unknown
CASSINI ORBITER	urn:nasa:pds:instrument_host.CO	1.0	Product_Instrument_Host_PDS3	Unknown
CO-V/E/J/S/SS-RPWS-4-SUMM-KEY60S-V1.0	urn:nasa:pds:data_set.CO-V/E/J/S/SS-RPWS-4	1.0	Product_Data_Set_PDS3	Unknown
CO-V/E/J/S/SS-RPWS-2-REFDR-ALL-V1.0	urn:nasa:pds:data_set.CO-V/E/J/S/SS-RPWS-2	1.0	Product_Data_Set_PDS3	Unknown
WFFULLDS	urn:nasa:pds:data_set.CO-V/E/J/S/SS-RPWS-2	1.0	Product_File_Repository	Submitted
KEYDS	urn:nasa:pds:data_set.CO-V/E/J/S/SS-RPWS-4	1.0	Product_File_Repository	Submitted
CORPWS_0164	urn:nasa:pds:volume.CORPWS_0164	1.0	Collection_Volume_PDS3	Unknown
RADIO AND PLASMA WAVE SCIENCE for CO	urn:nasa:pds:instrument.RPWS_CO	1.0	Product_Instrument_PDS3	Unknown
RPWSINST	urn:nasa:pds:instrument.RPWS_CO:RPWSINST	1.0	Product_File_Repository	Submitted
RAWDS	urn:nasa:pds:data_set.CO-V/E/J/S/SS-RPWS-2	1.0	Product_File_Repository	Submitted
MISSION	urn:nasa:pds:mission.CASSINI-HUYGENS:MIS	1.0	Product_File_Repository	Submitted
CO-V/E/J/S/SS-RPWS-2-REFDR-WFRFULL-V1.0	urn:nasa:pds:data_set.CO-V/E/J/S/SS-RPWS-2	1.0	Product_Data_Set_PDS3	Unknown

Step 4: the output file ctlg2.out is empty, and the command line output is:

```
Feb 27, 2012 4:17:37 PM org.apache.oodt.cas.filemgr.datatransfer.RemoteDataTransferFactory <init>
INFO: RemoteDataTransfer enabled: using chunk size: [1024]
Feb 27, 2012 4:17:37 PM org.apache.oodt.cas.filemgr.datatransfer.RemoteDataTransferer
setFileManagerUrl
INFO: Remote Data Transfer to: [http://pdstest.jpl.nasa.gov:9100] enabled
org.apache.oodt.cas.filemgr.structs.exceptions.CatalogException: java.lang.Exception:
java.lang.NullPointerException
    at
    org.apache.oodt.cas.filemgr.system.XmlRpcFileManagerClient.getProductByName(XmlRpcFileManagerC
lient.java:1118)
    at
    gov.nasa.pds.citool.ingestor.StorageIngestor.getProductByName(StorageIngestor.java:156)
    at
    gov.nasa.pds.citool.CIToolIngestor.getProductFromStorageService(CIToolIngestor.java:284)
    at gov.nasa.pds.citool.CIToolIngestor.getFilesFromStorageService(CIToolIngestor.java:237)
    at gov.nasa.pds.citool.CIToolIngestor.convertToCatalogObject(CIToolIngestor.java:215)
    at gov.nasa.pds.citool.CIToolIngestor.process(CIToolIngestor.java:316)
    at gov.nasa.pds.citool.CIToolIngestor.ingest(CIToolIngestor.java:121)
    at gov.nasa.pds.citool.CITool.processMain(CITool.java:564)
    at gov.nasa.pds.citool.CITool.main(CITool.java:580)
```

Exception: null

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.

Step 6: essentially the same as step 4

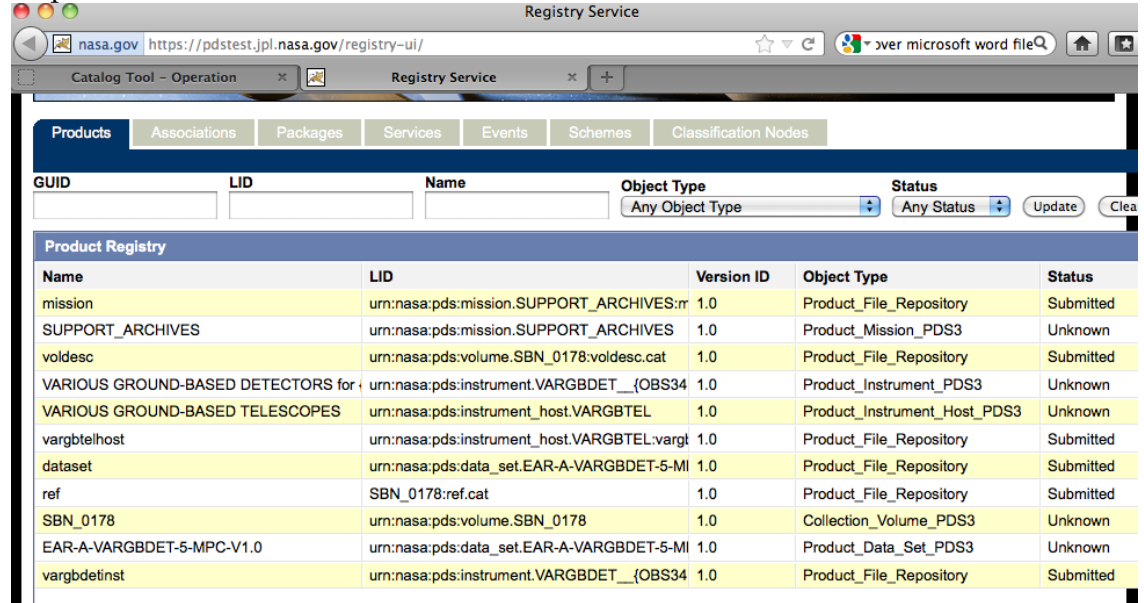
```
Feb 27, 2012 4:23:40 PM org.apache.oodt.cas.filemgr.datatransfer.RemoteDataTransferFactory <init>
INFO: RemoteDataTransfer enabled: using chunk size: [1024]
Feb 27, 2012 4:23:40 PM org.apache.oodt.cas.filemgr.datatransfer.RemoteDataTransferer
setFileManagerUrl
INFO: Remote Data Transfer to: [http://pdstest.jpl.nasa.gov:9100] enabled
org.apache.oodt.cas.filemgr.structs.exceptions.CatalogException: java.lang.Exception:
java.lang.NullPointerException
    at
org.apache.oodt.cas.filemgr.system.XmlRpcFileManagerClient.getProductByName(XmlRpcFileManagerC
lient.java:1118)
    at
gov.nasa.pds.citool.ingestor.StorageIngestor.getProductByName(StorageIngestor.java:156)
    at
gov.nasa.pds.citool.CIToolIngestor.getProductFromStorageService(CIToolIngestor.java:284)
    at gov.nasa.pds.citool.CIToolIngestor.getFilesFromStorageService(CIToolIngestor.java:237)
    at gov.nasa.pds.citool.CIToolIngestor.convertToCatalogObject(CIToolIngestor.java:215)
    at gov.nasa.pds.citool.CIToolIngestor.process(CIToolIngestor.java:316)
    at gov.nasa.pds.citool.CIToolIngestor.ingest(CIToolIngestor.java:121)
    at gov.nasa.pds.citool.CITool.processMain(CITool.java:564)
    at gov.nasa.pds.citool.CITool.main(CITool.java:580)
```

Exception: null

Step 7:

```
Feb 27, 2012 10:30:26 PM org.apache.oodt.cas.filemgr.datatransfer.RemoteDataTransferFactory <init>
INFO: RemoteDataTransfer enabled: using chunk size: [1024]
Feb 27, 2012 10:30:26 PM org.apache.oodt.cas.filemgr.datatransfer.RemoteDataTransferer
setFileManagerUrl
INFO: Remote Data Transfer to: [http://pdstest.jpl.nasa.gov:9100] enabled
```

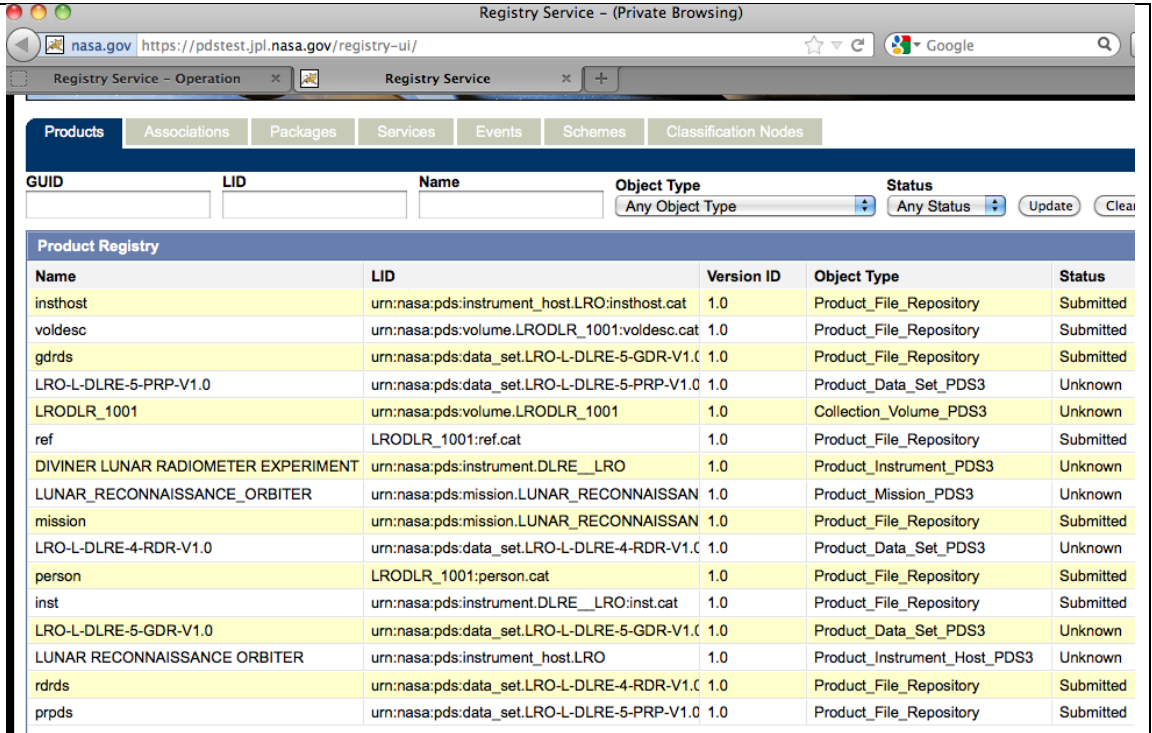
Step 8:



Step 10:

Exception: null

Step 14:

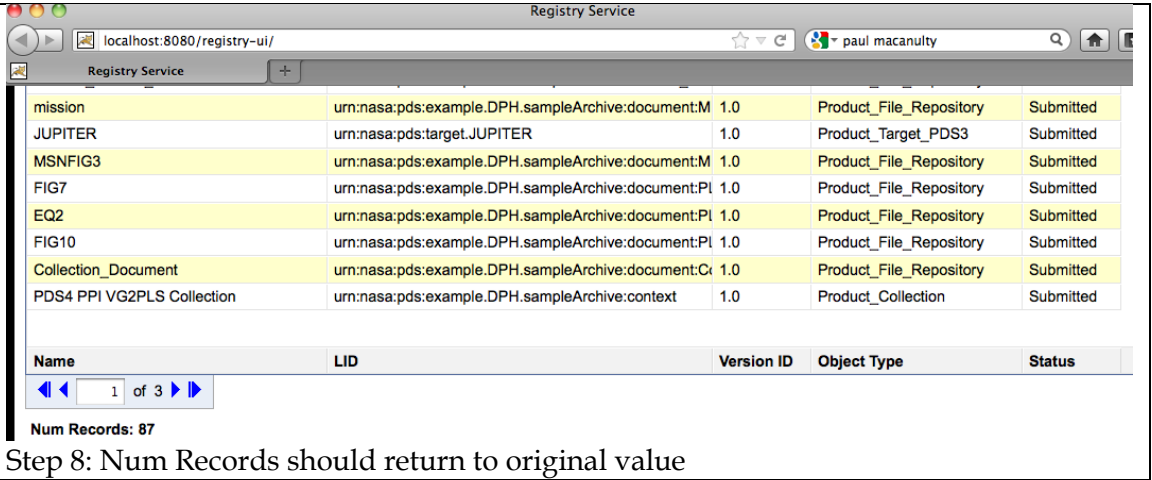
	 <table border="1" data-bbox="418 338 1523 835"> <thead> <tr> <th>Name</th> <th>LID</th> <th>Version ID</th> <th>Object Type</th> <th>Status</th> </tr> </thead> <tbody> <tr><td>insthost</td><td>urn:nasa:pds:instrument_host.LRO:insthost.cat</td><td>1.0</td><td>Product_File_Repository</td><td>Submitted</td></tr> <tr><td>voldesc</td><td>urn:nasa:pds:volume.LRODLR_1001:voldesc.cat</td><td>1.0</td><td>Product_File_Repository</td><td>Submitted</td></tr> <tr><td>gdrds</td><td>urn:nasa:pds:data_set.LRO-L-DLRE-5-GDR-V1.0</td><td>1.0</td><td>Product_File_Repository</td><td>Submitted</td></tr> <tr><td>LRO-L-DLRE-5-PRP-V1.0</td><td>urn:nasa:pds:data_set.LRO-L-DLRE-5-PRP-V1.0</td><td>1.0</td><td>Product_Data_Set_PDS3</td><td>Unknown</td></tr> <tr><td>LRODLR_1001</td><td>urn:nasa:pds:volume.LRODLR_1001</td><td>1.0</td><td>Collection_Volume_PDS3</td><td>Unknown</td></tr> <tr><td>ref</td><td>LRODLR_1001:ref.cat</td><td>1.0</td><td>Product_File_Repository</td><td>Submitted</td></tr> <tr><td>DIVINER LUNAR RADIOMETER EXPERIMENT</td><td>urn:nasa:pds:instrument.DLRE__LRO</td><td>1.0</td><td>Product_Instrument_PDS3</td><td>Unknown</td></tr> <tr><td>LUNAR_RECONNAISSANCE_ORBITER</td><td>urn:nasa:pds:mission.LUNAR_RECONNAISSAN</td><td>1.0</td><td>Product_Mission_PDS3</td><td>Unknown</td></tr> <tr><td>mission</td><td>urn:nasa:pds:mission.LUNAR_RECONNAISSAN</td><td>1.0</td><td>Product_File_Repository</td><td>Submitted</td></tr> <tr><td>LRO-L-DLRE-4-RDR-V1.0</td><td>urn:nasa:pds:data_set.LRO-L-DLRE-4-RDR-V1.0</td><td>1.0</td><td>Product_Data_Set_PDS3</td><td>Unknown</td></tr> <tr><td>person</td><td>LRODLR_1001:person.cat</td><td>1.0</td><td>Product_File_Repository</td><td>Submitted</td></tr> <tr><td>inst</td><td>urn:nasa:pds:instrument.DLRE__LRO:inst.cat</td><td>1.0</td><td>Product_File_Repository</td><td>Submitted</td></tr> <tr><td>LRO-L-DLRE-5-GDR-V1.0</td><td>urn:nasa:pds:data_set.LRO-L-DLRE-5-GDR-V1.0</td><td>1.0</td><td>Product_Data_Set_PDS3</td><td>Unknown</td></tr> <tr><td>LUNAR RECONNAISSANCE ORBITER</td><td>urn:nasa:pds:instrument_host.LRO</td><td>1.0</td><td>Product_Instrument_Host_PDS3</td><td>Unknown</td></tr> <tr><td>rdrcs</td><td>urn:nasa:pds:data_set.LRO-L-DLRE-4-RDR-V1.0</td><td>1.0</td><td>Product_File_Repository</td><td>Submitted</td></tr> <tr><td>prpds</td><td>urn:nasa:pds:data_set.LRO-L-DLRE-5-PRP-V1.0</td><td>1.0</td><td>Product_File_Repository</td><td>Submitted</td></tr> </tbody> </table>	Name	LID	Version ID	Object Type	Status	insthost	urn:nasa:pds:instrument_host.LRO:insthost.cat	1.0	Product_File_Repository	Submitted	voldesc	urn:nasa:pds:volume.LRODLR_1001:voldesc.cat	1.0	Product_File_Repository	Submitted	gdrds	urn:nasa:pds:data_set.LRO-L-DLRE-5-GDR-V1.0	1.0	Product_File_Repository	Submitted	LRO-L-DLRE-5-PRP-V1.0	urn:nasa:pds:data_set.LRO-L-DLRE-5-PRP-V1.0	1.0	Product_Data_Set_PDS3	Unknown	LRODLR_1001	urn:nasa:pds:volume.LRODLR_1001	1.0	Collection_Volume_PDS3	Unknown	ref	LRODLR_1001:ref.cat	1.0	Product_File_Repository	Submitted	DIVINER LUNAR RADIOMETER EXPERIMENT	urn:nasa:pds:instrument.DLRE__LRO	1.0	Product_Instrument_PDS3	Unknown	LUNAR_RECONNAISSANCE_ORBITER	urn:nasa:pds:mission.LUNAR_RECONNAISSAN	1.0	Product_Mission_PDS3	Unknown	mission	urn:nasa:pds:mission.LUNAR_RECONNAISSAN	1.0	Product_File_Repository	Submitted	LRO-L-DLRE-4-RDR-V1.0	urn:nasa:pds:data_set.LRO-L-DLRE-4-RDR-V1.0	1.0	Product_Data_Set_PDS3	Unknown	person	LRODLR_1001:person.cat	1.0	Product_File_Repository	Submitted	inst	urn:nasa:pds:instrument.DLRE__LRO:inst.cat	1.0	Product_File_Repository	Submitted	LRO-L-DLRE-5-GDR-V1.0	urn:nasa:pds:data_set.LRO-L-DLRE-5-GDR-V1.0	1.0	Product_Data_Set_PDS3	Unknown	LUNAR RECONNAISSANCE ORBITER	urn:nasa:pds:instrument_host.LRO	1.0	Product_Instrument_Host_PDS3	Unknown	rdrcs	urn:nasa:pds:data_set.LRO-L-DLRE-4-RDR-V1.0	1.0	Product_File_Repository	Submitted	prpds	urn:nasa:pds:data_set.LRO-L-DLRE-5-PRP-V1.0	1.0	Product_File_Repository	Submitted
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Comments	<p>Step 2 uncovered a problem previously dismissed under <a href="http://oodt.jpl.nasa.gov/jira/browse/PDS-47">http://oodt.jpl.nasa.gov/jira/browse/PDS-47</a>. “Unknown” is probably a bad value.</p> <p>Step 4: This is a known problem. Catalog -mingest fails if voldesc.cat has multiple values for keywords such as ^DATA_SET_CATALOG and ^REFERENCE_CATALOG.  <a href="https://oodt.jpl.nasa.gov/jira/browse/PDS-52">https://oodt.jpl.nasa.gov/jira/browse/PDS-52</a></p> <p>Step 5: Catalog -mingest fails if files to ingest do not include voldesc.cat. Not having voldesc.cat is fairly common.  <a href="https://oodt.jpl.nasa.gov/jira/browse/PDS-53">https://oodt.jpl.nasa.gov/jira/browse/PDS-53</a></p> <p>Step 10: The tool gives an extremely uninformative error message. First, it would be great if ingesting a DATA_SET_MAP_PROJECTION object was not an error. However, given that that is effectively how PDS3 behaves, the error message should at least indicate which file caused catalog -mingest to halt.  <a href="https://oodt.jpl.nasa.gov/jira/browse/PDS-54">https://oodt.jpl.nasa.gov/jira/browse/PDS-54</a></p>																																																																																					
Date of Testing	2012 Feb 27																																																																																					
Test Personnel	Richard Chen																																																																																					

Test Case ID	GNRT.T1
Description	Generate a PDS4 label from a PDS3 label or a PDS-specific DOM object.
Test Steps	Some files in testHarvest come from PDS3 labels. Generate automatically and compare. Step 3 would be better with an xml diff. <ol style="list-style-type: none"> <li>1. cd testDir/testGenerate</li> </ol>

	<ol style="list-style-type: none"> <li>2. generate -p ELE_MOM.LBL -t data.vm</li> <li>3. generate -d -p ELE_MOM.LBL -t data.vm &gt; ele_mom.pds4.lbl</li> <li>4. diff -w ../testHarvest/data/ele_mom_tblChar.xml ele_mom.pds4.lbl</li> <li>5. rm ele_mom.pds4.lbl</li> </ol>
<p>Test Results</p>	<p>Step 2: generate seems to need either -d or -o</p> <pre>gov.nasa.pds.imaging.generate.cli.options.InvalidOptionException: PDS3 label must be specified.     at gov.nasa.pds.imaging.generate.GenerateLauncher.query(GenerateLauncher.java:152)     at gov.nasa.pds.imaging.generate.GenerateLauncher.main(GenerateLauncher.java:194) PDS3 label must be specified.</pre> <p>Step 4:</p> <pre>&lt;?xml version="1.0" encoding="UTF-8"?&gt; &lt;&lt;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"&gt; --- &gt; &lt;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"&gt; 78,79c69,70 &lt;     &lt;dph:spacecraft_clock_start_count&gt;2/20541:22:726&lt;/dph:spacecraft_clock_start_count&gt; &lt;     &lt;dph:spacecraft_clock_stop_count&gt;2/20661:20:726&lt;/dph:spacecraft_clock_stop_count&gt; --- &gt;     &lt;spacecraft_clock_start_count&gt;2/20541:22:726&lt;/spacecraft_clock_start_count&gt; &gt;     &lt;spacecraft_clock_stop_count&gt;2/20661:20:726&lt;/spacecraft_clock_stop_count&gt; 81,82c72 &lt;     &lt;Node_Area&gt; &lt;     &lt;/Node_Area&gt; --- &gt;     &lt;Node_Area/&gt;</pre>
<p>Comments</p>	<p>These may be due to unfamiliarity with the velocity/generate language. Nevertheless</p> <ol style="list-style-type: none"> <li>1. The PDS3 file has:       <pre>^TABLE = "ELE_MOM.TAB"</pre>       What's the correct way to handle the caret in the template? Because of this, data.vm has       <pre>&lt;file_name&gt;\$label.PRODUCT_ID&lt;/file_name&gt;</pre>       instead of the more correct       <pre>&lt;file_name&gt;\$label.^TABLE&lt;/file_name&gt;</pre> </li> <li>2. The template has       <pre>&lt;dph:spacecraft_clock_start_count&gt;2/20541:22:726&lt;/dph:spacecraft_clock_start_count&gt;</pre>       But the output strips off dph:     </li> <li>3. I assume I need a #foreach, but what more? The PDS3 file has (simplified):       <pre>OBJECT = TABLE OBJECT = COLUMN NAME = "TIME" END_OBJECT = COLUMN OBJECT = COLUMN NAME = "ELE_DEN" END_OBJECT = COLUMN</pre>       While the PDS4 label has:     </li> </ol>

	<pre>&lt;Field_Character&gt;   &lt;name&gt;TIME&lt;/name&gt; &lt;/Field_Character&gt; &lt;Field_Character&gt;   &lt;name&gt;ELE_DEN&lt;/name&gt; &lt;/Field_Character&gt;</pre> <p>4. The opening &lt;?xml&gt; tag is stripped off</p> <p><a href="https://oodt.jpl.nasa.gov/jira/browse/PDS-55">https://oodt.jpl.nasa.gov/jira/browse/PDS-55</a></p> <p>generate without -d or -o probably shouldn't die; maybe -d should be the default. In any case, the error message is incorrect</p> <p><a href="https://oodt.jpl.nasa.gov/jira/browse/PDS-58">https://oodt.jpl.nasa.gov/jira/browse/PDS-58</a></p>
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

Test Case ID	HVT.T1
Description	Provide a command-line interface, accept a configuration file, recursively traverse directories, determine candidates for registration, capture metadata, submit metadata to the Registry Service, track each artifact registration.
Test Steps	<p>Note: Steps 5 to 8 remove Harvest's results from the registry (to be nice to the next tester).</p> <ol style="list-style-type: none"> <li>1. cd <i>testDir</i>; cp testHarvest/harvestContext.xml ./harvestContext.xml</li> <li>2. Edit harvestContext.xml: change path of &lt;file&gt; to <i>testDir/testHarvest/...</i></li> <li>3. In browser, note Num Records at bottom of <i>registryURL/registry-ui/</i></li> <li>4. harvest <i>harvestOptions -c harvestContext.xml &gt; out.txt</i></li> <li>5. In browser, check for harvested files. <i>registryURL/registry-ui/</i></li> <li>6. grep "Registration Package GUID" out.txt</li> <li>7. Replace <i>guid</i> with the GUID from the previous line: curl -X DELETE -v <i>registryURL/registry/packages/guid/members</i></li> <li>8. <i>registryURL/registry-ui</i></li> </ol>
Test Results	<p>Step 3: If registry was empty (ideally), Num Records was 0</p> <p>Step 4: The bottom of out.txt should have:</p> <pre>Summary: 13 of 13 file(s) processed, 6 skipped 87 of 87 products registered. 88 of 88 associations registered, 0 skipped End of Log</pre> <p>Step 5: Num Records = old value + products registered in previous step</p>

	 <p>Step 8: Num Records should return to original value</p>
Comments	
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

Test Case ID	HVT.T2
Description	Execute from a scheduler, accept a configuration file, recursively traverse directories, determine candidates for registration, capture metadata, submit metadata to the Registry Service.
Test Steps	<ol style="list-style-type: none"> <li>1. In browser, note current Num Records. <i>registryURL/registry-ui/</i></li> <li>2. <code>cd testDir/; mv testHarvest testHarvestXXX</code></li> <li>3. <code>harvest harvestOptions -c harvestContext.xml -l log.txt -P 9000 -w 120</code></li> <li>4. In browser, note unchanged Num Records. <i>registryURL/registry-ui/</i></li> </ol> <p>In a different terminal window</p> <ol style="list-style-type: none"> <li>5. <code>harvest-ctrl --url http://localhost:9000/xmlrpc --operation --isRunning</code></li> <li>6. <code>mv testDir/testHarvestXXX testDir/testHarvest</code></li> <li>7. In browser, note changing Num Records. <i>registryURL/registry-ui/</i></li> </ol> <p>After Num Records stops increasing</p> <ol style="list-style-type: none"> <li>8. <code>grep "products registered" log.txt</code></li> <li>9. <code>harvest-ctrl --url http://localhost:9000/xmlrpc --operation --stop</code></li> <li>10. <code>grep Registration log.txt</code></li> <li>11. Replace <i>guid</i> with the GUID from the previous line: <code>curl -X DELETE -v registryURL/registry/packages/guid/members</code></li> <li>12. Check Num Records back to original value: <i>registryURL/registry-ui</i></li> </ol>
Test Results	<p>Step 5: Yes</p> <p>Step 8: Num Records should have increased by the number of products registered.</p> <p>Step 9: Crawl Daemon: [http://localhost:9000/xmlrpc]: shutdown successful</p>
Comments	
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

Test Case ID	HVT.T3
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Description	Harvest a large number of files. Skip for build 2b due to a lack of test data.
Test Steps	<p>Steps 3 and 6 may take 2 hours each.</p> <ol style="list-style-type: none"> <li>1. <code>cd testDir/; cp testHarvest/harvestLarge.xml ./harvestLarge.xml</code></li> <li>2. Edit harvestLarge.xml: change path of &lt;file&gt; to <code>testDir/testHarvest/...</code></li> <li>3. <code>harvest harvestOptions -c harvestLarge.xml &gt; out.txt</code></li> <li>4. In browser, check for harvested files. <code>registryURL/registry-ui/</code></li> <li>5. <code>grep Registration out.txt</code></li> <li>6. Replace <i>guid</i> with the GUID from the previous line:  <code>curl -X DELETE -v <a href="#">registryURL/registry/packages/guid/members</a></code>  Concurrently, in a browser, <code>registryURL/registry-ui</code></li> <li>7. <code>registryURL/registry-ui</code></li> </ol>
Test Results	<p>Step 3: The bottom of out.txt should have:</p> <pre>Summary: 6660 of 6661 file(s) processed, 0 skipped 13308 of 13314 products registered. 6654 of 6654 associations registered, 0 skipped End of Log</pre>
Comments	
Date of Testing	
Test Personnel	Richard Chen

Test Case ID	GEN.T1
Description	Run components distributed over multiple machines on any PDS-supported platforms.
Test Steps	Ensure your machine is not the same machine as the registry's. Run AATESTME.* steps.
Test Results	Results should be as described in the AATESTME.* Test Results.
Comments	
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

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

Test Case ID	GEN.T3 *not ready for build 1
Description	Run tools via an application programming interface.



Test Steps	
Test Results	
Comments	
Date of Testing	
Test Personnel	

Test Case ID	GEN.T4 *not ready for build 2b
Description	Services provide an interface to enable monitoring of health.
Test Steps	
Test Results	
Comments	
Date of Testing	
Test Personnel	

Test Case ID	GEN.T5 *not ready for build 2b
Description	Applications meet Section 508 compliance guidelines.
Test Steps	
Test Results	
Comments	
Date of Testing	
Test Personnel	

Test Case ID	GEN.T6
Description	Restrict access to operations that alter the content of the registry.
Test Steps	(Skip this test if registry is uncontrolled) As in AATESTME.T4, run any other test in AATESTME.* with an incorrect username or password.
Test Results	
Comments	
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

Test Case ID	GEN.T7
Description	Document components' capabilities, dependencies, interfaces, installation, operation
Test Steps	Examine such documentation, currently accessible from <a href="http://pds-engineering.jpl.nasa.gov/pds2010/development/2.1.0/">http://pds-engineering.jpl.nasa.gov/pds2010/development/2.1.0/</a>
Test Results	

Comments	
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

Test Case ID	PRV.T1
Description	Accept a file or a directory name for product(s) to be validated. If directory, be able to traverse the tree to find products. Indicate the schemas utilized during validation.
Test Steps	<ol style="list-style-type: none"> <li>1. cd testDir/</li> <li>2. validate testHarvest/ document/mission.xml</li> <li>3. validate testHarvest/</li> </ol>
Test Results	<p>Step 2:</p> <pre> PDS Validate Tool Report Configuration:   Version      1.0.0   Time        Sun, Feb 12 2012 at 01:51:13 AM   Core Schemas [PDS4_OPS_0600h.xsd]   Model Version 0600h  Parameters:   Target(s)    [testHarvest/ document/mission.xml]   Severity Level Warnings   Recurse Directories true Validation Details: PASS: file:testDir/ testHarvest/ document/mission.xml Summary:   1 of 1 file(s) processed, 0 skipped   1 of 1 file(s) passed validation End of Report </pre> <p>Step 3: the xml files (except harvest policy file harvestContext.xml and ele_mom_tblChar.xml) pass. The others fail</p> <pre> PDS Validate Tool Report Configuration:   Version      1.0.0   Time        Sun, Feb 12 2012 at 01:40:42 AM   Core Schemas [PDS4_OPS_0600h.xsd]   Model Version 0600h  Parameters:   Target(s)    [testHarvest]   Severity Level Warnings   Recurse Directories true Validation Details: <b>FAIL: file: testDir/testHarvest/harvestContext.xml</b>   ERROR line 14, 9: cvc-elt.1.a: Cannot find the declaration of element 'policy'. PASS: file: testDir/testHarvest/Product_Archive_Bundle.xml FAIL: file: testDir/testHarvest/README.TXT   FATAL_ERROR line 3, 23: Content is not allowed in prolog. PASS: file: testDir/testHarvest/browse/Collection_Browse.xml FAIL: file: testDir/testHarvest/browse/collection_browse_inventory_20110823.tab   FATAL_ERROR line 1, 1: Content is not allowed in prolog. FAIL: file: testDir/testHarvest/browse/ELE_MOM.PDF   FATAL_ERROR line 1, 1: Content is not allowed in prolog. PASS: file: testDir/testHarvest/browse/ele_mom_browse.xml PASS: file: testDir/testHarvest/context/Collection_Context.xml FAIL: file: testDir/testHarvest/context/collection_context_inventory_20110823.tab   FATAL_ERROR line 1, 1: Content is not allowed in prolog. PASS: file: testDir/testHarvest/context/InstHostPDS3_VG2.xml PASS: file: testDir/testHarvest/context/InstPDS3_PLS_VG2.xml PASS: file: testDir/testHarvest/context/MissionPDS3_VOYAGER.xml PASS: file: testDir/testHarvest/context/TargetPDS3_JUPITER.xml PASS: file: testDir/testHarvest/data/Collection_Data.xml </pre>

	<p>FAIL: file: <i>testDir/testHarvest/data/collection_data_inventory_20110823.tab</i>  FATAL_ERROR line 1, 1: Content is not allowed in prolog.  FAIL: file: <i>testDir/testHarvest/data/ELE_MOM.TAB</i>  FATAL_ERROR line 1, 1: Content is not allowed in prolog.  <b>FAIL: file: <i>testDir/testHarvest/data/ele_mom_tblChar.xml</i></b>  ERROR line 7, 44: cvc-elt.4.2: Cannot resolve 'dph:Product_Table_Character' to a type definition for element 'Product_Observational'.  FAIL: file: <i>testDir/testHarvest/document/CHECKSUMS.TXT</i>  FATAL_ERROR line 1, 1: Content is not allowed in prolog.  PASS: file: <i>testDir/testHarvest/document/checksums.xml</i>  PASS: file: <i>testDir/testHarvest/document/Collection_document.xml</i>  [many lines deleted]  FAIL: file: <i>testDir/testHarvest/schemas/Product_TableChar_tailored_0600h.xsd</i>  ERROR line 24, 60: cvc-elt.1.a: Cannot find the declaration of element 'xs:schema'.  Summary:  91 of 91 file(s) processed, 0 skipped  18 of 91 file(s) passed validation  End of Report</p>
Comments	This is not a bug, but can validate better indicate a non .xml file than FATAL_ERROR line 1, 1: Content is not allowed in prolog.
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

Test Case ID	PRV.T2 *not ready for build 2b
Description	Verify that a referenced file exists.
Test Steps	<ol style="list-style-type: none"> <li>1. validate <i>vtest/minimalImage.xml</i></li> <li>2. echo fakeTokenOfData &gt; <i>vtest/i943630r.raw</i></li> <li>3. validate <i>vtest/minimalImage.xml</i></li> </ol>
Test Results	Step 1: ERROR [ <i>testDir/vtest/harvestPolicy.xml</i> ] Step 3: no errors
Comments	
Date of Testing	
Test Personnel	

Test Case ID	PRV.T3
Description	Validate aggregate products and all products referenced in the aggregation.
Test Steps	<ol style="list-style-type: none"> <li>1. cd <i>testDir</i></li> <li>2. validate <i>testHarvest/Product_Archive_Bundle.xml</i></li> </ol>
Test Results	<p>PDS Validate Tool Report  Configuration:  Version 1.0.0  Time Sun, Feb 12 2012 at 01:56:00 AM  Core Schemas [PDS4_OPS_0600h.xsd]  Model Version 0600h  Parameters:  Target(s) [testHarvest/Product_Archive_Bundle.xml]  Severity Level Warnings  Recurse Directories true  Validation Details:  PASS: file: <i>testDir/testHarvest/Product_Archive_Bundle.xml</i>  PASS: file: <i>testDir/testHarvest/browse/Collection_Browse.xml</i>  PASS: file: <i>testDir/testHarvest/browse/ele_mom_browse.xml</i>  PASS: file: <i>testDir/testHarvest/context/Collection_Context.xml</i>  PASS: file: <i>testDir/testHarvest/context/InstHostPDS3_VG2.xml</i>  PASS: file: <i>testDir/testHarvest/context/InstPDS3_PLS_VG2.xml</i></p>

	<p>PASS: file: testDir/testHarvest/context/MissionPDS3_VOYAGER.xml                  PASS: file: testDir/testHarvest/context/TargetPDS3_JUPITER.xml                  PASS: file: testDir/testHarvest/data/Collection_Data.xml                  FAIL: file: testDir/testHarvest/data/ele_mom_tblChar.xml                  ERROR line 7, 44: cvc-elt.4.2: Cannot resolve 'dph:Product_Table_Character' to a type definition for element 'Product_Observational'.                  PASS: file: testDir/testHarvest/document/Collection_Document.xml                  PASS: file: testDir/testHarvest/document/checksums.xml                  PASS: file: testDir/testHarvest/document/errata.xml                  PASS: file: testDir/testHarvest/document/mission.xml                  PASS: file: testDir/testHarvest/document/plsinst.xml                  PASS: file: testDir/testHarvest/schemas/aaaCollection_XML_Schema.xml                  PASS: file: testDir/testHarvest/schemas/aaaLabelFor_PDS4_PDS_0600h.xml                  PASS: file: testDir/testHarvest/schemas/aaaLabelFor_Product_TableChar_tailored_0600h.xml                  Summary:                  19 of 19 file(s) processed, 0 skipped                  18 of 19 file(s) passed validation                  End of Report</p>
Comments	
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

Test Case ID	PRV.T4 *not ready for build 2b
Description	Merge label fragments
Test Steps	
Test Results	
Comments	
Date of Testing	
Test Personnel	

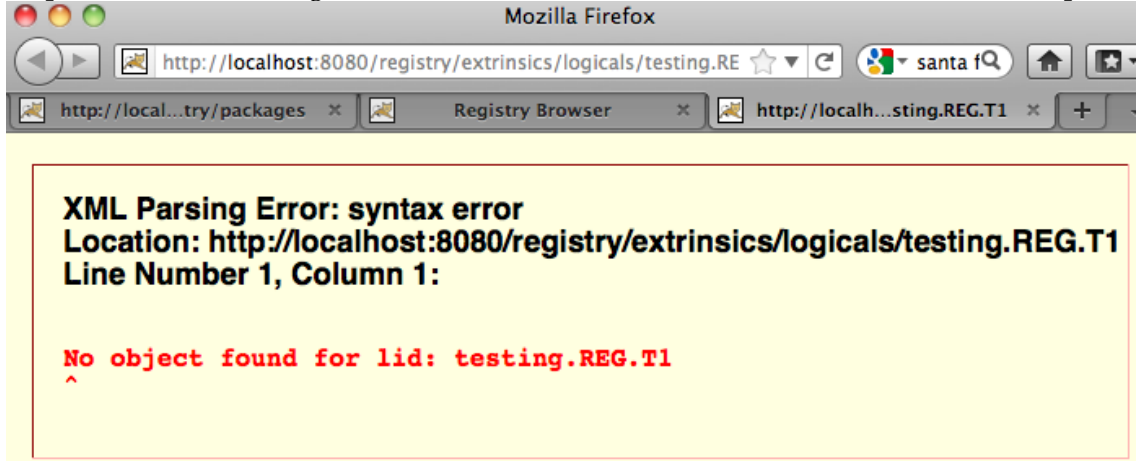
Test Case ID	PRV.T5 *not ready for build 2b
Description	Validate schemas
Test Steps	
Test Results	
Comments	
Date of Testing	
Test Personnel	

Test Case ID	PRV.T6
Description	Accept schema file specified by file or directory
Test Steps	<p>Validate the one file that failed in PRV.T1:</p> <ul style="list-style-type: none"> <li>validate testHarvest/data/ele_mom_tblChar.xml -x                      testHarvest/schemas/Product_TableChar_tailored_0600h.xsd</li> </ul>

Test Results	<p>PDS Validate Tool Report                      Configuration:                      Version 1.0.0                      Time Sun, Feb 12 2012 at 01:58:34 AM                      Core Schemas [PDS4_OPS_0600h.xsd]                      Model Version 0600h                      Parameters:                      Target(s) [testHarvest/data/ele_mom_tblChar.xml]                      User-Specified Schemas [testHarvest/schemas/Product_TableChar_tailored_0600h.xsd]                      Severity Level Warnings                      Recurse Directories true                      Validation Details:                      PASS: file: testDir/testHarvest/data/ele_mom_tblChar.xml                      Summary:                      1 of 1 file(s) processed, 0 skipped                      1 of 1 file(s) passed validation</p> <p>End of Report</p>
Comments	
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

Test Case ID	PRV.T7
Description	Accept schema file specified by file or directory
Test Steps	<p>Repeat the previous step except specify a target directory instead of a file.</p> <ul style="list-style-type: none"> <li>validate testHarvest/ -x                      testHarvest/schemas/Product_TableChar_tailored_0600h.xsd</li> </ul>
Test Results	<p>Many .xml files that previously passed in PRV.T1 now fail</p> <p>PDS Validate Tool Report                      Configuration:                      Version 1.0.0                      Time Sun, Feb 12 2012 at 01:38:46 AM                      Core Schemas [PDS4_OPS_0600h.xsd]                      Model Version 0600h                      Parameters:                      Target(s) [testHarvest]                      User-Specified Schemas [testHarvest/schemas/Product_TableChar_tailored_0600h.xsd]                      Severity Level Warnings                      Recurse Directories true                      Validation Details:                      FAIL: file: testDir/testHarvest/harvestContext.xml                      ERROR line 14, 9: cvc-elt.1.a: Cannot find the declaration of element 'policy'.                      PASS: file: testDir/testHarvest/Product_Archive_Bundle.xml                      FAIL: file: testDir/testHarvest/README.TXT                      FATAL_ERROR line 3, 23: Content is not allowed in prolog.                      PASS: file: testDir/testHarvest/browse/Collection_Browse.xml                      FAIL: file: testDir/testHarvest/browse/collection_browse_inventory_20110823.tab                      FATAL_ERROR line 1, 1: Content is not allowed in prolog.                      FAIL: file: testDir/testHarvest/browse/ELE_MOM.PDF                      FATAL_ERROR line 1, 1: Content is not allowed in prolog.                      PASS: file: testDir/testHarvest/browse/ele_mom_browse.xml                      PASS: file: testDir/testHarvest/context/Collection_Context.xml                      FAIL: file: testDir/testHarvest/context/collection_context_inventory_20110823.tab                      FATAL_ERROR line 1, 1: Content is not allowed in prolog.                      FAIL: file: testDir/testHarvest/context/InstHostPDS3_VG2.xml                      ERROR line 6, 49: cvc-elt.4.2: Cannot resolve 'pds:Product_Instrument_Host_PDS3' to a type definition for element 'Product_Instrument_Host_PDS3'.                      FAIL: file: testDir/testHarvest/context/InstPDS3_PLS_VG2.xml                      ERROR line 6, 44: cvc-elt.4.2: Cannot resolve 'pds:Product_Instrument_PDS3' to a type definition for element 'Product_Instrument_PDS3'.                      [...]</p>
Comments	Is this expected behavior? This may be proper handling of weird namespace collisions.

Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

Test Case ID	REG.T1
Description	Validate and accept metadata to register an artifact or modify an artifact's registration, query for a registered artifact, delete a registered artifact
Test Steps	<ol style="list-style-type: none"> <li>1. <code>cd testDir</code></li> <li>2. <code>registryURL/registry/extrinsics/logicals/testing.REG.T1</code> in a browser shows no current product has lid "testing.REG.t1", which input files test.REG.T1[abc].xml have.</li> <li>3. <code>curl curlOptions -X POST -H "Content-type:application/xml" -v -d @testRegistry/test.REG.T1a.xml registryURL/registry/extrinsics/logicals</code> attempts to register the bad input file</li> <li>4. Repeat step 1 to ensure lid still does not exist.</li> <li>5. <code>curl curlOptions -X POST -H "Content-type:application/xml" -v -d @testRegistry/test.REG.T1b.xml registryURL/registry/extrinsics/logicals</code> registers a good input file</li> <li>6. Repeat step 2 to see the lid</li> <li>7. <code>curl curlOptions -X DELETE --verbose registryURL/registry/extrinsics/testing.REG.T1.v1.0</code></li> <li>8. Repeat step 1 to ensure lid no longer exists</li> <li>9. <code>curl curlOptions -X POST -H "Content-type:application/xml" -v -d @testRegistry/test.REG.T1c.xml registryURL/registry/extrinsics/logicals</code> registers a good input file with different values for the phone numbers</li> <li>10. Repeat step 1 to see the changed values</li> </ol>
Test Results	<p>Step 2: The error message should be "HTTP Status 500 -". If lid does exist, run step 7</p>  <p>Step 3:</p> <pre> * About to connect() to localhost port 8080 (#0) * Trying 127.0.0.1... connected * Connected to localhost (127.0.0.1) port 8080 (#0) &gt; POST /registry/extrinsics/logicals HTTP/1.1 &gt; User-Agent: curl/7.19.7 (universal-apple-darwin10.0) libcurl/7.19.7 OpenSSL/0.9.8r zlib/1.2.3 &gt; Host: localhost:8080 &gt; Accept: */* &gt; Content-type:application/xml &gt; Content-Length: 655 &lt; HTTP/1.1 400 Bad Request &lt; Server: Apache-Coyote/1.1                     </pre>

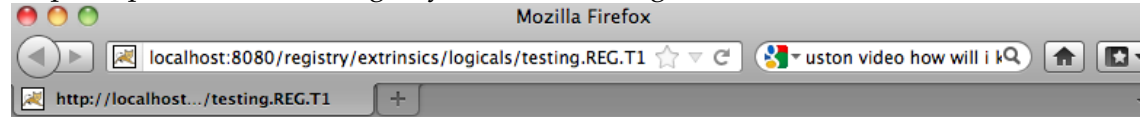
```
< Content-Type: text/html;charset=utf-8
< Content-Length: 1004
< Date: Sun, 12 Feb 2012 10:17:01 GMT
< Connection: close
* Closing connection #0
<html><head><title>Apache Tomcat/6.0.35 - Error report</title><style><!--H1 {font-
family:Tahoma,Arial,sans-serif;color:white;background-color:#525D76;font-size:22px;} 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-color:white;color:black;font-size:12px;}A {color : black;}HR {color :
#525D76;--></style> </head><body><h1>HTTP Status 400 - Bad Request</h1><HR size="1"
noshade="noshade"><p><b>type</b> Status report</p><p><b>message</b> <u>Bad
Request</u></p><p><b>description</b> <u>The request sent by the client was syntactically incorrect
(Bad Request)</u></p><HR size="1" noshade="noshade"><h3>Apache
Tomcat/6.0.35</h3></body></html>
```

Step 4: Same as step 2

Step 5: Benign output messages without "ERROR":

```
* About to connect() to localhost port 8080 (#0)
* Trying 127.0.0.1... connected
* Connected to localhost (127.0.0.1) port 8080 (#0)
> POST /registry/extrinsics/logicals HTTP/1.1
> User-Agent: curl/7.19.7 (universal-apple-darwin10.0) libcurl/7.19.7 OpenSSL/0.9.8r zlib/1.2.3
> Host: localhost:8080
> Accept: */*
> Content-type:application/xml
> Content-Length: 646
< HTTP/1.1 200 OK
< Server: Apache-Coyote/1.1
< Content-Type: application/xml
< Content-Length: 0
< Date: Sun, 12 Feb 2012 10:18:14 GMT
* Connection #0 to host localhost left intact
* Closing connection #0
```

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



```
- <ns2:response>
- <ns2:results>
- <ns2:extrinsicObject description="Stolen from http://pdscm/2010/registry/registry-service/operate/index.html
with attribute lid above changed for uniqueness" objectType="Product_Array_2D_Image" name="Product 1234
v1" lid="testing.REG.T1" guid="testing.REG.T1.v1.0">
- <ns2:slot name="last-name" id="3298">
<ns2:value>Doe</ns2:value>
</ns2:slot>
- <ns2:slot name="first-name" id="3299">
<ns2:value>John</ns2:value>
</ns2:slot>
- <ns2:slot name="phone" id="3300">
<ns2:value>(818)777-7777</ns2:value>
<ns2:value>(818)888-8888</ns2:value>
</ns2:slot>
</ns2:extrinsicObject>
</ns2:results>
</ns2:response>
```

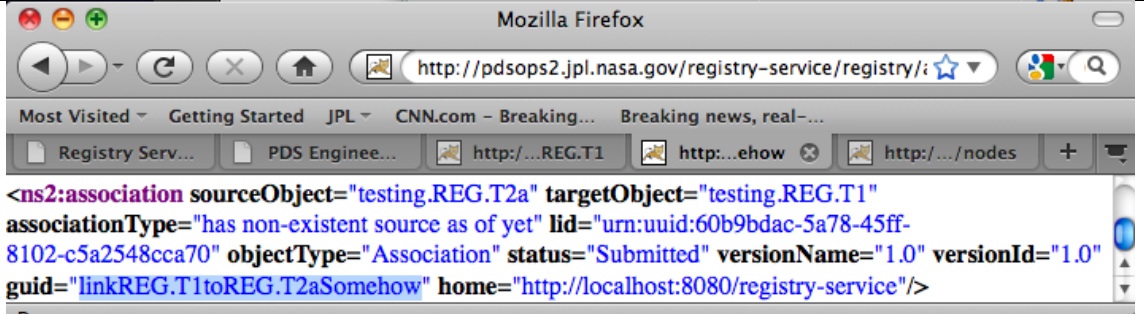
Step 7:

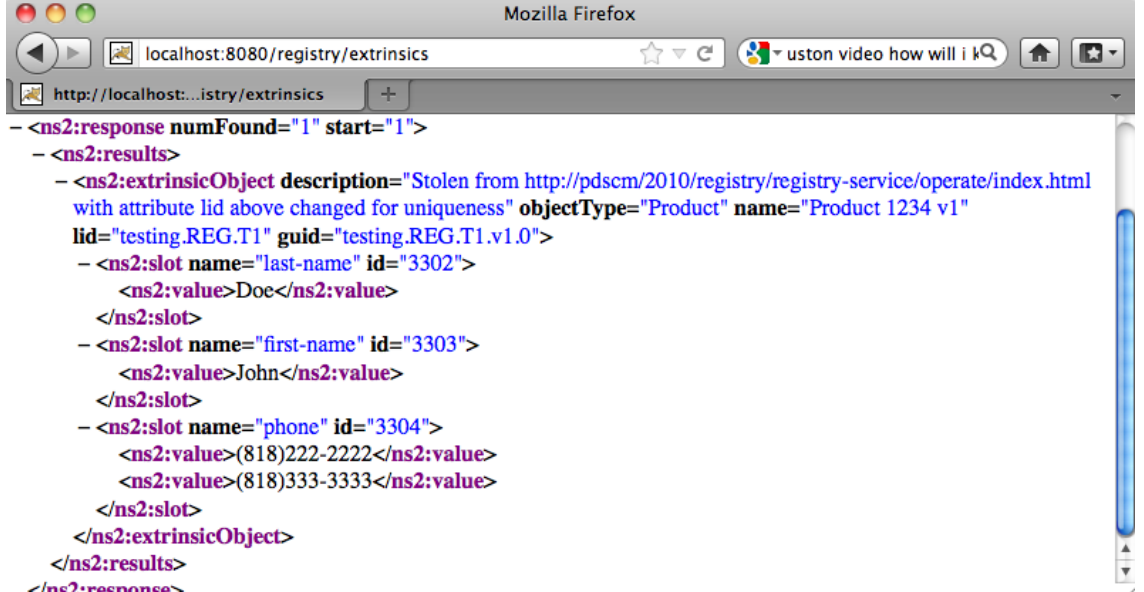
```
* About to connect() to localhost port 8080 (#0)
* Trying 127.0.0.1... connected
* Connected to localhost (127.0.0.1) port 8080 (#0)
> DELETE /registry/extrinsics/testing.REG.T1.v1.0 HTTP/1.1
> User-Agent: curl/7.19.7 (universal-apple-darwin10.0) libcurl/7.19.7 OpenSSL/0.9.8r zlib/1.2.3
> Host: localhost:8080
> Accept: */*
< HTTP/1.1 200 OK
```

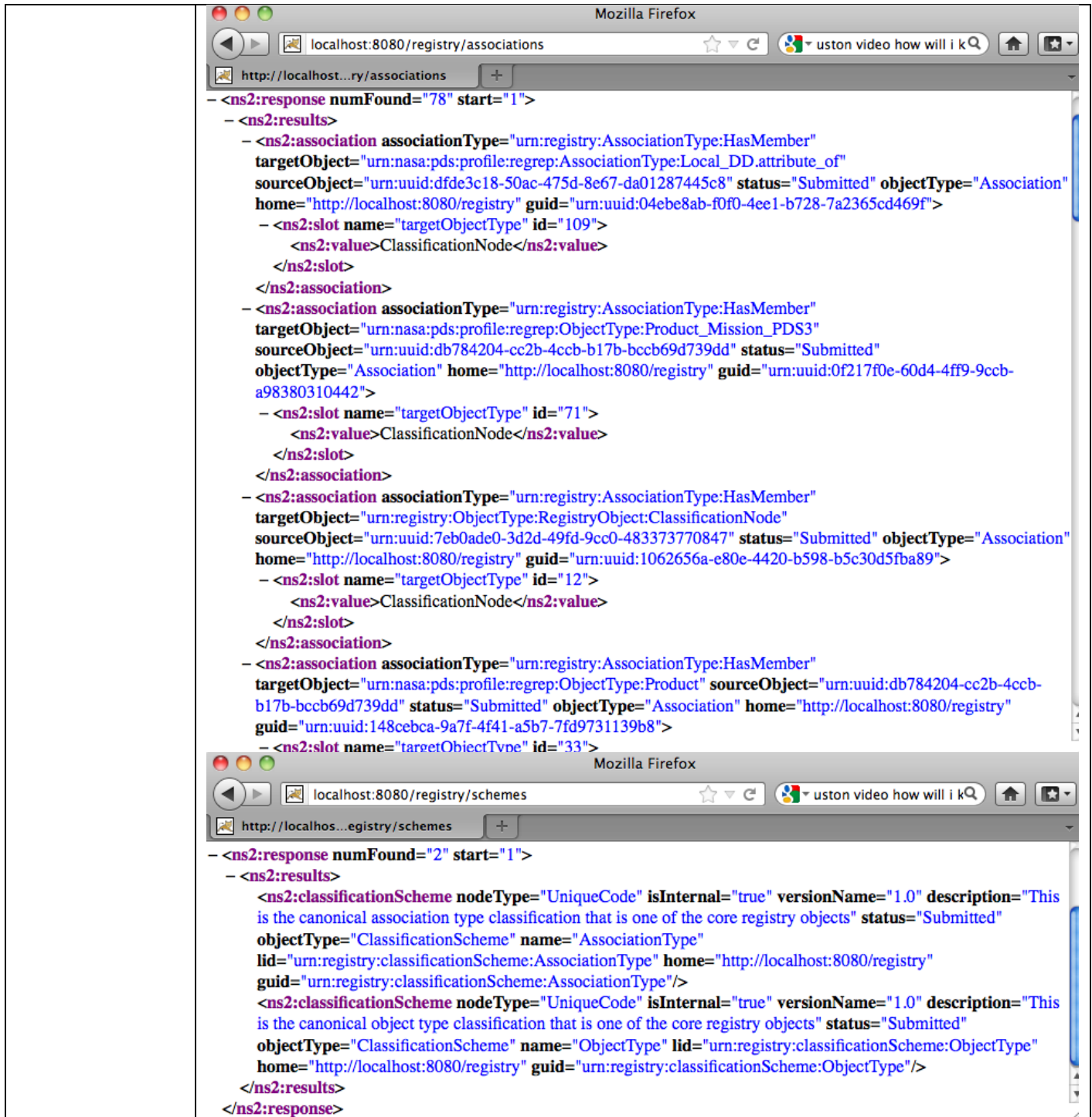
	<p>&lt; Server: Apache-Coyote/1.1                  &lt; Content-Type: application/xml                  &lt; Content-Length: 0                  &lt; Date: Sun, 12 Feb 2012 10:54:26 GMT                  * Connection #0 to host localhost left intact                  * Closing connection #0</p> <p>Step 8: 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</p>
Comments	
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen


Test Case ID	REG.T2 *obsolete
Description	Relate artifact registrations, regardless of whether artifact has been registered yet
Test Steps	<ol style="list-style-type: none"> <li>1. <i>registryURL/registry/associations/linkREG.T1toREG.T2aSomehow</i> shows no such associations</li> <li>2. <i>curl curlOptions -X POST -H "Content-type:application/xml" -v -d @testRegistry/test.REG.T2.xml registryURL/registry/registry/associations -uusername:password -k</i> adds 1 association (from a nonexistent sourceLid) to desired targetLid</li> <li>3. Repeat step 1 to see the association</li> </ol> <p>(POSTing the sourceLids referenced in steps 2 and 3 is actually unnecessary)</p>
Test Results	<p>Step 1: The error message should be "HTTP Status 500", then much like REG.T1's step 2's output. If not (i.e. if output looks like step 3's below</p> <pre>curl curlOptions -X DELETE -v registryURL/registry/associations/linkREG.T1toREG.T2aSomehow</pre> <p>Step 2: Benign output messages without "ERROR"</p> <pre>* About to connect() to pdsops2.jpl.nasa.gov port 80 (#0) * Trying 128.149.132.54... connected * Connected to pdsops2.jpl.nasa.gov (128.149.132.54) port 80 (#0) &gt; POST /registry/registry/associations HTTP/1.1 &gt; User-Agent: curl/7.19.7 (universal-apple-darwin10.0) libcurl/7.19.7 OpenSSL/0.9.8l zlib/1.2.3 &gt; Host: pdsops2.jpl.nasa.gov &gt; Accept: */* &gt; Content-type:application/xml &gt; Content-Length: 257 &lt; HTTP/1.1 201 Created &lt; Server: Apache-Coyote/1.1 &lt; Location: http://localhost:8080/registry/registry/associations/linkREG.T1toREG.T2aSomehow &lt; Content-Type: text/plain &lt; Transfer-Encoding: chunked &lt; Date: Sat, 30 Apr 2011 07:36:44 GMT * Connection #0 to host pdsops2.jpl.nasa.gov left intact * Closing connection #0 linkREG.T1toREG.T2aSomehow</pre> <p>Step 3:</p>



	 <pre> &lt;ns2:association sourceObject="testing.REG.T2a" targetObject="testing.REG.T1" associationType="has non-existent source as of yet" lid="urn:uuid:60b9bdac-5a78-45ff-8102-c5a2548cca70" objectType="Association" status="Submitted" versionName="1.0" versionId="1.0" guid="linkREG.T1toREG.T2aSomehow" home="http://localhost:8080/registry-service"/&gt;                     </pre>
Comments	
Date of Testing	
Test Personnel	

Test Case ID	REG.T3
Description	Maintain policies for classes of artifacts, i.e. all classes of artifacts capture a base set of metadata, in the form of XML attributes: objectType, guid as well as metadata specific to each artifact class.
Test Steps	In a browser, <a href="#">registryURL/registry/extrinsics</a> <a href="#">registryURL/registry/associations</a> <a href="#">registryURL/registry/services</a> <a href="#">registryURL/registry/schemes</a> <a href="#">registryURL/registry/events</a> <a href="#">registryURL/registry/packages</a>
Test Results	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. There are no services yet.   <pre> - &lt;ns2:response numFound="1" start="1"&gt;   - &lt;ns2:results&gt;     - &lt;ns2:extrinsicObject description="Stolen from http://pdscm/2010/registry/registry-service/operate/index.html with attribute lid above changed for uniqueness" objectType="Product" name="Product 1234 v1" lid="testing.REG.T1" guid="testing.REG.T1.v1.0"&gt;       - &lt;ns2:slot name="last-name" id="3302"&gt;         &lt;ns2:value&gt;Doe&lt;/ns2:value&gt;       &lt;/ns2:slot&gt;       - &lt;ns2:slot name="first-name" id="3303"&gt;         &lt;ns2:value&gt;John&lt;/ns2:value&gt;       &lt;/ns2:slot&gt;       - &lt;ns2:slot name="phone" id="3304"&gt;         &lt;ns2:value&gt;(818)222-2222&lt;/ns2:value&gt;         &lt;ns2:value&gt;(818)333-3333&lt;/ns2:value&gt;       &lt;/ns2:slot&gt;     &lt;/ns2:extrinsicObject&gt;   &lt;/ns2:results&gt; &lt;/ns2:response&gt;                     </pre>



	 <p>The image shows two screenshots of a Mozilla Firefox browser window. The top screenshot displays the URL localhost:8080/registry/events and shows an XML response with two &lt;ns2:auditableEvent&gt; entries. The first entry has a timestamp of 2012-02-12T02:54:26.897-08:00 and a requestId of deleteObjectById testing.REG.T1.v1.0. The second entry has a timestamp of 2012-02-10T16:39:19.858-08:00 and a requestId of deletePackageMembers urn:uuid:90acfa15-5c23-437d-a2f0-a87565235a57. The bottom screenshot displays the URL localhost:8080/registry/packages and shows an XML response with nine &lt;ns2:registryPackage&gt; entries. The first entry is 'Core Objects' and the last is 'PDS Objects'. Each entry includes details like versionName, status, name, lid, and home.</p>
Comments	
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

Test Case ID	REG.T4 *obsolete - URL no longer is a valid entry point
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"> <li>1. curl curlOptions -X POST -H "Content-type:application/xml" -v -d @testRegistry/test.REG.T4.xml registryURL/registry/extrinsics/logicals</li> <li>2. In a browser, <a href="https://localhost:8080/registry-ui">https://localhost:8080/registry-ui</a></li> </ol>

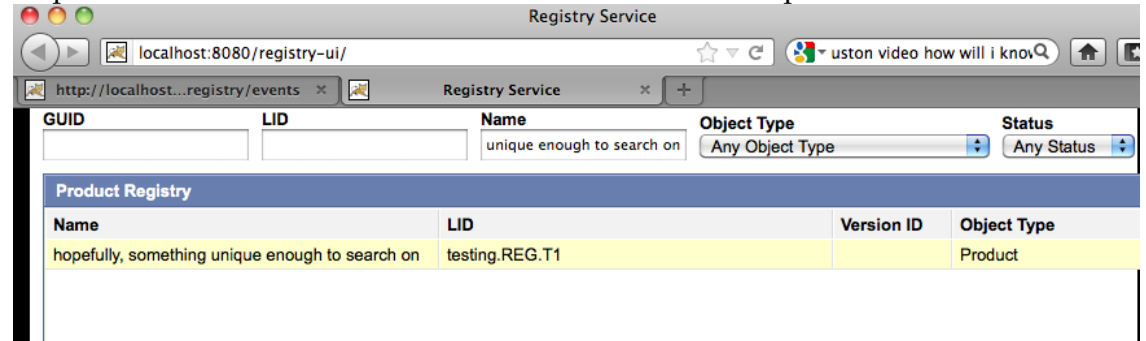
3. Under "Name", enter "hopefully, something unique enough to search on" from test.REG.T4.xml. Click "Update"
4. Click anywhere on the row to see Product Details including GUID
5. `curl curlOptions -X DELETE -v registryURL/registry/extrinsics/guidFromLastStep`
6. Click the "Update" button again.

Test Results

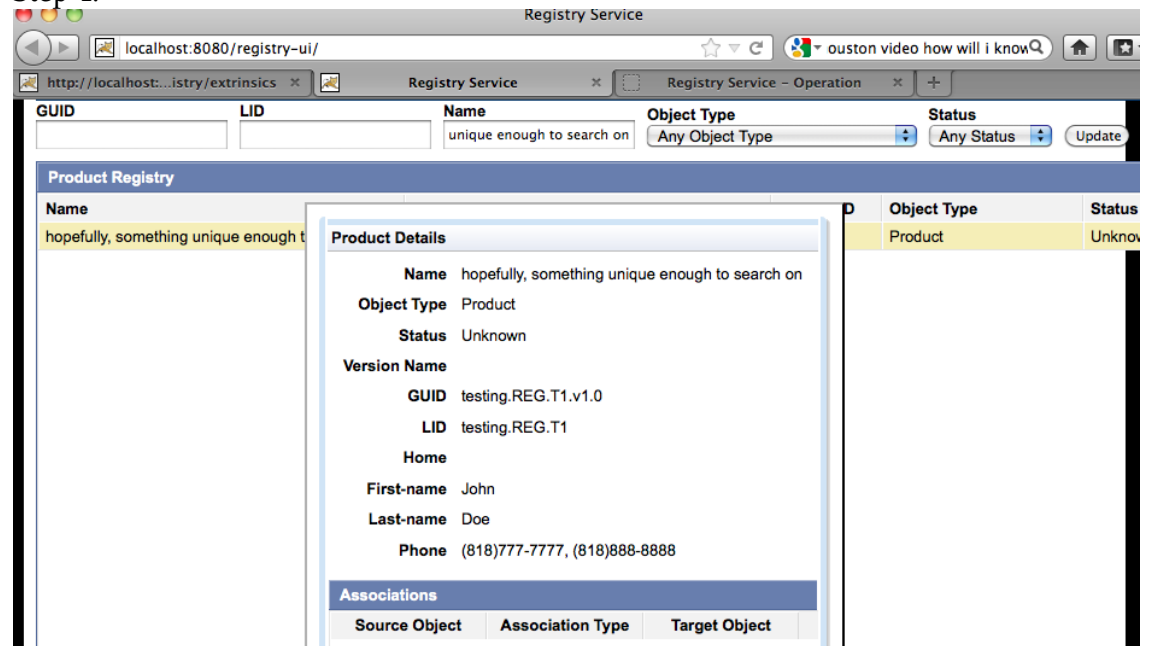
Step 1: Note the value (an assigned LID) of "Location:" in the positive message:

```
* About to connect() to localhost port 8080 (#0)
* Trying 127.0.0.1... connected
* Connected to localhost (127.0.0.1) port 8080 (#0)
> POST /registry/extrinsics/logicals HTTP/1.1
> User-Agent: curl/7.19.7 (universal-apple-darwin10.0) libcurl/7.19.7 OpenSSL/0.9.8r zlib/1.2.3
> Host: localhost:8080
> Accept: */*
> Content-type:application/xml
> Content-Length: 663
< HTTP/1.1 200 OK
< Server: Apache-Coyote/1.1
< Content-Type: application/xml
< Content-Length: 0
< Date: Sun, 12 Feb 2012 11:07:23 GMT
* Connection #0 to host localhost left intact
* Closing connection #0
```

Step 3: the LID should match the value of "Location:" in step 1



Step 4:



Step 5:

```
* About to connect() to localhost port 8080 (#0)
* Trying 127.0.0.1... connected
* Connected to localhost (127.0.0.1) port 8080 (#0)
```

	<pre>&gt; DELETE /registry/extrinsics/testing.REG.T1.v1.0 HTTP/1.1 &gt; User-Agent: curl/7.19.7 (universal-apple-darwin10.0) libcurl/7.19.7 OpenSSL/0.9.8r zlib/1.2.3 &gt; Host: localhost:8080 &gt; Accept: */* &lt; HTTP/1.1 200 OK &lt; Server: Apache-Coyote/1.1 &lt; Content-Type: application/xml &lt; Content-Length: 0 &lt; Date: Sun, 12 Feb 2012 11:21:27 GMT * Connection #0 to host localhost left intact * Closing connection #0</pre> <p>Step 6: The row should be gone</p>
<p>Comments</p>	<p><a href="http://oodt.jpl.nasa.gov/jira/browse/PDS-46">http://oodt.jpl.nasa.gov/jira/browse/PDS-46</a></p> <p>Registry does not accept extrinsicObjects without attribute guid, which is reasonable but against requirement L5.REG.6, "The service shall assign a global unique identifier to a registered artifact." Rerunning step 1 after removing the input file's line  <b>guid="testing.REG.T1.v1.0"</b></p> <pre>* About to connect() to localhost port 8080 (#0) * Trying 127.0.0.1... connected * Connected to localhost (127.0.0.1) port 8080 (#0) &gt; POST /registry/extrinsics/logicals HTTP/1.1 &gt; User-Agent: curl/7.19.7 (universal-apple-darwin10.0) libcurl/7.19.7 OpenSSL/0.9.8r zlib/1.2.3 &gt; Host: localhost:8080 &gt; Accept: */* &gt; Content-type:application/xml &gt; Content-Length: 633 &gt; &lt; HTTP/1.1 500 Internal Server Error &lt; Server: Apache-Coyote/1.1 &lt; Content-Type: text/html;charset=utf-8 &lt; Transfer-Encoding: chunked &lt; Date: Sun, 12 Feb 2012 11:34:28 GMT &lt; Connection: close &lt; &lt;html&gt;&lt;head&gt;&lt;title&gt;Apache Tomcat/6.0.35 - Error report&lt;/title&gt;&lt;style&gt;&lt;!--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;--&gt;&lt;/style&gt; &lt;/head&gt;&lt;body&gt;&lt;h1&gt;HTTP Status 500 - &lt;/h1&gt;&lt;HR size="1" noshade="noshade"&gt;&lt;p&gt;&lt;b&gt;type&lt;/b&gt; Exception report&lt;/p&gt;&lt;p&gt;&lt;b&gt;message&lt;/b&gt; &lt;u&gt;&lt;/u&gt;&lt;/p&gt;&lt;p&gt;&lt;b&gt;description&lt;/b&gt; &lt;u&gt;The server encountered an internal error () that prevented it from fulfilling this request.&lt;/u&gt;&lt;/p&gt;&lt;p&gt;&lt;b&gt;exception&lt;/b&gt; &lt;pre&gt;javax.persistence.PersistenceException: org.hibernate.id.IdentifierGenerationException: ids for this class must be manually assigned before calling save(): gov.nasa.pds.registry.model.ExtrinsicObject org.hibernate.ejb.AbstractEntityManagerImpl.convert(AbstractEntityManagerImpl.java:123 5) org.hibernate.ejb.AbstractEntityManagerImpl.convert(AbstractEntityManagerImpl.java:116 8) org.hibernate.ejb.AbstractEntityManagerImpl.convert(AbstractEntityManagerImpl.java:117 4) org.hibernate.ejb.AbstractEntityManagerImpl.merge(AbstractEntityManagerImpl.java:691) sun.reflect.GeneratedMethodAccessor145.invoke(Unknown Source) sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:25) java.lang.reflect.Method.invoke(Method.java:597) org.springframework.orm.jpa.ExtendedEntityManagerCreator\$ExtendedEntityManagerInvocationHandler.invoke(ExtendedEntityManagerCreator.java:365) \$Proxy49.merge(Unknown Source) sun.reflect.GeneratedMethodAccessor145.invoke(Unknown Source) sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:25) java.lang.reflect.Method.invoke(Method.java:597)</pre>

	<pre> org.springframework.orm.jpa.SharedEntityManagerCreator\$SharedEntityManagerInvocati onHandler.invoke(SharedEntityManagerCreator.java:240) \$Proxy49.merge(Unknown Source) gov.nasa.pds.registry.service.MetadataStoreJPA.updateRegistryObject(MetadataStoreJPA.java:544) sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method) sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:39) sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:25) java.lang.reflect.Method.invoke(Method.java:597) org.springframework.aop.support.AopUtils.invokeJoinpointUsingReflection(AopUtils.java:309) org.springframework.aop.framework.ReflectiveMethodInvocation.invokeJoinpoint(ReflectiveMethodInvocation.java:183) org.springframework.aop.framework.ReflectiveMethodInvocation.proceed(ReflectiveMethodInvocation.java:150) org.springframework.transaction.interceptor.TransactionInterceptor.invoke(TransactionInterceptor.java:110) org.springframework.aop.framework.ReflectiveMethodInvocation.proceed(ReflectiveMethodInvocation.java:172) org.springframework.aop.framework.JdkDynamicAopProxy.invoke(JdkDynamicAopProxy.java:202) \$Proxy50.updateRegistryObject(Unknown Source) gov.nasa.pds.registry.service.RegistryServiceImpl.updateObject(RegistryServiceImpl.java:445) gov.nasa.pds.registry.resource.ExtrinsicsResource.updateExtrinsic(ExtrinsicsResource.java:381) sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method) sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:39) sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:25) java.lang.reflect.Method.invoke(Method.java:597) com.sun.jersey.server.impl.model.method.dispatch.AbstractResourceMethodDispatchProvider\$ResponseOutInvoker._dispatch(AbstractResourceMethodDispatchProvider.java:187) com.sun.jersey.server.impl.model.method.dispatch.ResourceJavaMethodDispatcher.dispatch(ResourceJavaMethodDispatcher.java:70) com.sun.jersey.server.impl.uri.rules.HttpMethodRule.accept(HttpMethodRule.java:279) com.sun.jersey.server.impl.uri.rules.RightHandPathRule.accept(RightHandPathRule.java:136) com.sun.jersey.server.impl.uri.rules.SubLocatorRule.accept(SubLocatorRule.java:121) com.sun.jersey.server.impl.uri.rules.RightHandPathRule.accept(RightHandPathRule.java:136) com.sun.jersey.server.impl.uri.rules.ResourceClassRule.accept(ResourceClassRule.java:86) com.sun.jersey.server.impl.uri.rules.RightHandPathRule.accept(RightHandPathRule.java:136) com.sun.jersey.server.impl.uri.rules.RootResourceClassesRule.accept(RootResourceClassesRule.java:74) com.sun.jersey.server.impl.application.WebApplicationImpl._handleRequest(WebApplicationImpl.java:1357) com.sun.jersey.server.impl.application.WebApplicationImpl._handleRequest(WebApplicationImpl.java:1289) com.sun.jersey.server.impl.application.WebApplicationImpl.handleRequest(WebApplicationImpl.java:1239) com.sun.jersey.server.impl.application.WebApplicationImpl.handleRequest(WebApplicationImpl.java:1229) com.sun.jersey.spi.container.servlet.WebComponent.service(WebComponent.java:420) com.sun.jersey.spi.container.servlet.ServletContainer.service(ServletContainer.java:497) com.sun.jersey.spi.container.servlet.ServletContainer.doFilter(ServletContainer.java:855) com.sun.jersey.spi.container.servlet.ServletContainer.doFilter(ServletContainer.java:828) com.sun.jersey.spi.container.servlet.ServletContainer.doFilter(ServletContainer.java:789) org.springframework.orm.jpa.support.OpenEntityManagerInViewFilter.doFilterInternal(OpenEntityManagerInViewFilter.java:113) org.springframework.web.filter.OncePerRequestFilter.doFilter(OncePerRequestFilter.java:76) &lt;/pre&gt; <pre> &lt;/pre&gt;&lt;/p&gt;&lt;p&gt;&lt;b&gt;root cause&lt;/b&gt; &lt;pre&gt;org.hibernate.id.IdentifierGenerationException: ids for this class must be manually assigned before calling save(): gov.nasa.pds.registry.model.ExtrinsicObject org.hibernate.id.Assigned.generate(Assigned.java:53) org.hibernate.event.def.AbstractSaveEventListener.saveWithGeneratedId(AbstractSaveEventListener.java:122) org.hibernate.ejb.event.EJB3MergeEventListener.saveWithGeneratedId(EJB3MergeEventListener.java:62) </pre> </pre>
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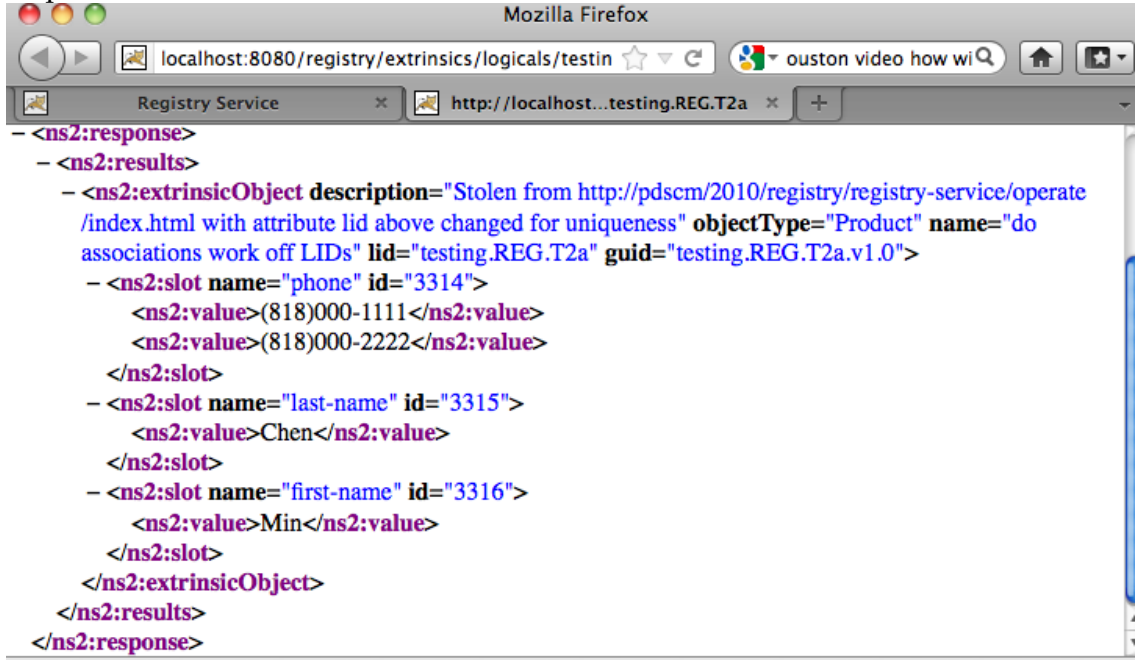
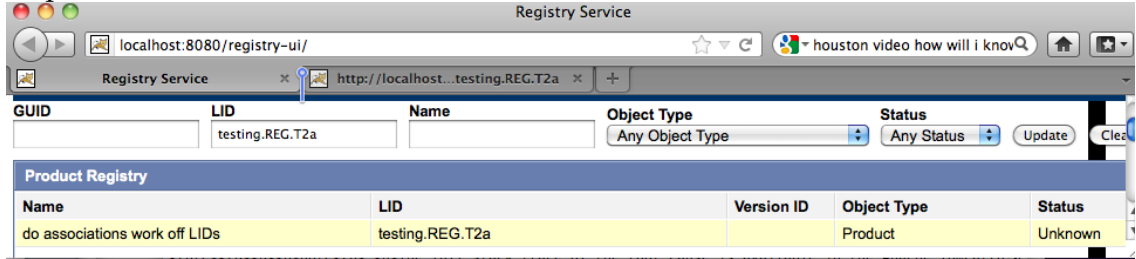
	<p>org.hibernate.event.def.DefaultMergeEventListener.mergeTransientEntity(DefaultMergeEventListener.java:313)</p> <p>org.hibernate.event.def.DefaultMergeEventListener.entityIsTransient(DefaultMergeEventListener.java:282)</p> <p>org.hibernate.event.def.DefaultMergeEventListener.onMerge(DefaultMergeEventListener.java:237)</p> <p>org.hibernate.event.def.DefaultMergeEventListener.onMerge(DefaultMergeEventListener.java:84)</p> <p>org.hibernate.impl.SessionImpl.fireMerge(SessionImpl.java:859)</p> <p>org.hibernate.impl.SessionImpl.merge(SessionImpl.java:843)</p> <p>org.hibernate.impl.SessionImpl.merge(SessionImpl.java:847)</p> <p>org.hibernate.ejb.AbstractEntityManagerImpl.merge(AbstractEntityManagerImpl.java:682)</p> <p>sun.reflect.GeneratedMethodAccessor145.invoke(Unknown Source)</p> <p>sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:25)</p> <p>java.lang.reflect.Method.invoke(Method.java:597)</p> <p>org.springframework.orm.jpa.ExtendedEntityManagerCreator\$ExtendedEntityManagerInvocationHandler.invoke(ExtendedEntityManagerCreator.java:365)</p> <p>\$Proxy49.merge(Unknown Source)</p> <p>sun.reflect.GeneratedMethodAccessor145.invoke(Unknown Source)</p> <p>sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:25)</p> <p>java.lang.reflect.Method.invoke(Method.java:597)</p> <p>org.springframework.orm.jpa.SharedEntityManagerCreator\$SharedEntityManagerInvocationHandler.invoke(SharedEntityManagerCreator.java:240)</p> <p>\$Proxy49.merge(Unknown Source)</p> <p>gov.nasa.pds.registry.service.MetadataStoreJPA.updateRegistryObject(MetadataStoreJPA.java:544)</p> <p>sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)</p> <p>sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:39)</p> <p>sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:25)</p> <p>java.lang.reflect.Method.invoke(Method.java:597)</p> <p>org.springframework.aop.support.AopUtils.invokeJoinpointUsingReflection(AopUtils.java:309)</p> <p>org.springframework.aop.framework.ReflectiveMethodInvocation.invokeJoinpoint(ReflectiveMethodInvocation.java:183)</p> <p>org.springframework.aop.framework.ReflectiveMethodInvocation.proceed(ReflectiveMethodInvocation.java:150)</p> <p>org.springframework.transaction.interceptor.TransactionInterceptor.invoke(TransactionInterceptor.java:110)</p> <p>org.springframework.aop.framework.ReflectiveMethodInvocation.proceed(ReflectiveMethodInvocation.java:172)</p> <p>org.springframework.aop.framework.JdkDynamicAopProxy.invoke(JdkDynamicAopProxy.java:202)</p> <p>\$Proxy50.updateRegistryObject(Unknown Source)</p> <p>gov.nasa.pds.registry.service.RegistryServiceImpl.updateObject(RegistryServiceImpl.java:445)</p> <p>gov.nasa.pds.registry.resource.ExtrinsicsResource.updateExtrinsic(ExtrinsicsResource.java:381)</p> <p>sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)</p> <p>sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:39)</p> <p>sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:25)</p> <p>java.lang.reflect.Method.invoke(Method.java:597)</p> <p>com.sun.jersey.server.impl.model.method.dispatch.AbstractResourceMethodDispatchProvider\$ResponseOutInvoker._dispatch(AbstractResourceMethodDispatchProvider.java:187)</p> <p>com.sun.jersey.server.impl.model.method.dispatch.ResourceJavaMethodDispatcher.dispatch(ResourceJavaMethodDispatcher.java:70)</p> <p>com.sun.jersey.server.impl.uri.rules.HttpMethodRule.accept(HttpMethodRule.java:279)</p> <p>com.sun.jersey.server.impl.uri.rules.RightHandPathRule.accept(RightHandPathRule.java:136)</p> <p>com.sun.jersey.server.impl.uri.rules.SubLocatorRule.accept(SubLocatorRule.java:121)</p> <p>com.sun.jersey.server.impl.uri.rules.RightHandPathRule.accept(RightHandPathRule.java:136)</p> <p>com.sun.jersey.server.impl.uri.rules.ResourceClassRule.accept(ResourceClassRule.java:86)</p> <p>com.sun.jersey.server.impl.uri.rules.RightHandPathRule.accept(RightHandPathRule.java:136)</p> <p>com.sun.jersey.server.impl.uri.rules.RootResourceClassesRule.accept(RootResourceClassesRule.java:74)</p> <p>com.sun.jersey.server.impl.application.WebApplicationImpl._handleRequest(WebApplicationImpl.java:1357)</p> <p>com.sun.jersey.server.impl.application.WebApplicationImpl._handleRequest(WebApplicationImpl.java:1357)</p>
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	<pre> onImpl.java:1289)     com.sun.jersey.server.impl.application.WebApplicationImpl.handleRequest(WebApplicatio nImpl.java:1239)     com.sun.jersey.server.impl.application.WebApplicationImpl.handleRequest(WebApplicatio nImpl.java:1229)     com.sun.jersey.spi.container.servlet.WebComponent.service(WebComponent.java:420)     com.sun.jersey.spi.container.servlet.ServletContainer.service(ServletContainer.java:497)     com.sun.jersey.spi.container.servlet.ServletContainer.doFilter(ServletContainer.java:855)     com.sun.jersey.spi.container.servlet.ServletContainer.doFilter(ServletContainer.java:828)     com.sun.jersey.spi.container.servlet.ServletContainer.doFilter(ServletContainer.java:789)     org.springframework.orm.jpa.support.OpenEntityManagerInViewFilter.doFilterInternal(Op enEntityManagerInViewFilter.java:113)     org.springframework.web.filter.OncePerRequestFilter.doFilter(OncePerRequestFilter.java:7 6) * Closing connection #0 &lt;/pre&gt; &lt;p&gt;&lt;b&gt;note&lt;/b&gt;&lt;u&gt;The full stack trace of the root cause is available in the Apache Tomcat/6.0.35 logs.&lt;/u&gt;&lt;/p&gt;&lt;hr size="1" noshade="noshade"&gt;&lt;h3&gt;Apache Tomcat/6.0.35&lt;/h3&gt;&lt;/body&gt;&lt;/html&gt; </pre>
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

Test Case ID	REG.T5 *obsolete
Description	Assign a version to a registered artifact based on its unique identifier
Test Steps	<ol style="list-style-type: none"> <li>1. <i>registryURL/registry/extrinsics/logicals/testing.REG.T2b</i> shows no current product targetLid=testing.REG.T2b</li> <li>2. <code>curl curlOptions -X POST -H "Content-type:application/xml" -v -d @testRegistry/test.REG.T5a.xml registryURL/registry/extrinsics/logicals</code></li> <li>3. Repeat step 1. Note that userVersion is 1.0</li> <li>4. <code>curl curlOptions -X POST -H "Content-type:application/xml" -v -d @testRegistry/test.REG.T5b.xml registryURL/registry/extrinsics/logicals</code></li> <li>5. Repeat step 1. Note that userVersion is 2.0</li> <li>6. <i>registryURL/registry/extrinsics/logicals/testing.REG.T2b/all</i> shows both versions</li> </ol>
Test Results	<p>Step 1: The error message should be "HTTP Status 500 -"</p> <p>Step 2: Benign output messages without "ERROR"</p> <p>Step 3: Upon success, the registry service returns good xml with userVersion = 1.0</p> <p>Step 5: Upon success, the registry service returns good xml with userVersion = 2.0</p> <p>Step 6: Upon success, the registry service returns good xml showing both posts.</p>
Comments	
Date of Testing	
Test Personnel	

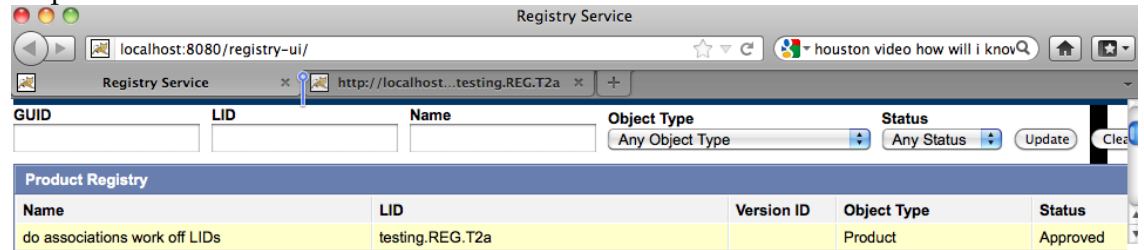
Test Case ID	REG.T6 *obsolete - URL no longer is a valid entry point
Description	Allow replacement, approval, deprecation, undeprecation, and verification of registered artifacts.
Test Steps	<ol style="list-style-type: none"> <li>1. In a browser, <i>registryURL/registry/extrinsics/logicals/testing.REG.T2a</i> shows no current product has lid "testing.REG.T2a".</li> <li>2. <code>curl curlOptions -X POST -H "Content-type:application/xml" -v -d @testRegistry/test.REG.T6a.xml registryURL/registry/extrinsics/logicals</code></li> <li>3. Repeat step 1 to see the lid</li> </ol>



	<ol style="list-style-type: none"> <li>4. In a browser, <a href="#">registryURL/registry-ui/</a> Under "LID", enter "testing.REG.T2a". Click "Update". If that URL is not found, repeat step 1 and note the XML attribute "status".</li> <li>5. <code>curl curlOptions -X POST -H "Content-type:application/xml" -v registryURL/registry/extrinsics/testing.REG.T2a.v1.0/approve</code></li> <li>6. Repeat step 4 to see the Status</li> <li>7. <code>curl curlOptions -X POST -H "Content-type:application/xml" -v registryURL/registry/extrinsics/testing.REG.T2a.v1.0/deprecate</code></li> <li>8. Repeat step 4 to see the Status</li> <li>9. <code>curl curlOptions -X POST -H "Content-type:application/xml" -v registryURL/registry/extrinsics/testing.REG.T2a.v1.0/undeprecate</code></li> <li>10. Repeat step 4 to see the Status</li> <li>11. <code>curl curlOptions -X POST -H "Content-type:application/xml" -v -d @testRegistry/test.REG.T6b.xml registryURL/registry/extrinsics/logicals</code> replaces the info in the first file with different values for the phone numbers</li> <li>12. Repeat step 1 to see the lid</li> </ol>										
<p>Test Results</p>	<p>Step 1: The error message should be "No object found for lid: testing.REG.T2a", very much like REG.T1's step 2's output. If not,  <code>curl curlOptions -X DELETE -v registryURL/registry/extrinsics/testing.REG.T2a.v1.0</code></p> <p>Step 2: Benign output messages without "ERROR", like REG.T1's step 5</p> <p>Step 3:</p>  <pre> - &lt;ns2:response&gt; - &lt;ns2:results&gt; - &lt;ns2:extrinsicObject description="Stolen from http://pdscm/2010/registry/registry-service/operate/index.html with attribute lid above changed for uniqueness" objectType="Product" name="do associations work off LIDs" lid="testing.REG.T2a" guid="testing.REG.T2a.v1.0"&gt; - &lt;ns2:slot name="phone" id="3314"&gt;   &lt;ns2:value&gt;(818)000-1111&lt;/ns2:value&gt;   &lt;ns2:value&gt;(818)000-2222&lt;/ns2:value&gt; &lt;/ns2:slot&gt; - &lt;ns2:slot name="last-name" id="3315"&gt;   &lt;ns2:value&gt;Chen&lt;/ns2:value&gt; &lt;/ns2:slot&gt; - &lt;ns2:slot name="first-name" id="3316"&gt;   &lt;ns2:value&gt;Min&lt;/ns2:value&gt; &lt;/ns2:slot&gt; &lt;/ns2:extrinsicObject&gt; &lt;/ns2:results&gt; &lt;/ns2:response&gt; </pre> <p>Step 4:</p>  <table border="1"> <thead> <tr> <th>Name</th> <th>LID</th> <th>Version ID</th> <th>Object Type</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>do associations work off LIDs</td> <td>testing.REG.T2a</td> <td></td> <td>Product</td> <td>Unknown</td> </tr> </tbody> </table> <p>Step 5:</p> <ul style="list-style-type: none"> <li>* About to connect() to localhost port 8080 (#0)</li> <li>* Trying 127.0.0.1... connected</li> </ul>	Name	LID	Version ID	Object Type	Status	do associations work off LIDs	testing.REG.T2a		Product	Unknown
Name	LID	Version ID	Object Type	Status							
do associations work off LIDs	testing.REG.T2a		Product	Unknown							

```
* Connected to localhost (127.0.0.1) port 8080 (#0)
> POST /registry/extrinsics/testing.REG.T2a.v1.0/approve HTTP/1.1
> User-Agent: curl/7.19.7 (universal-apple-darwin10.0) libcurl/7.19.7 OpenSSL/0.9.8r zlib/1.2.3
> 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: Sun, 12 Feb 2012 16:22:52 GMT
* Connection #0 to host localhost left intact
* Closing connection #0
```

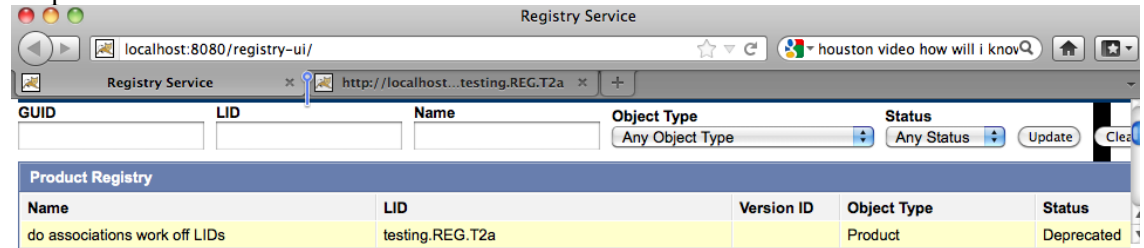
Step 6:



Step 7:

```
* About to connect() to localhost port 8080 (#0)
* Trying 127.0.0.1... connected
* Connected to localhost (127.0.0.1) port 8080 (#0)
> POST /registry/extrinsics/testing.REG.T2a.v1.0/deprecate HTTP/1.1
> User-Agent: curl/7.19.7 (universal-apple-darwin10.0) libcurl/7.19.7 OpenSSL/0.9.8r zlib/1.2.3
> 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: Sun, 12 Feb 2012 16:26:11 GMT
* Connection #0 to host localhost left intact
* Closing connection #0
```

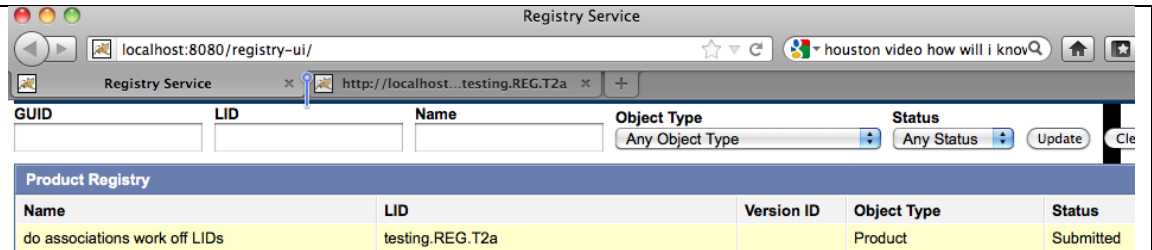
Step 8:



Step 9:

```
* About to connect() to localhost port 8080 (#0)
* Trying 127.0.0.1... connected
* Connected to localhost (127.0.0.1) port 8080 (#0)
> POST /registry/extrinsics/testing.REG.T2a.v1.0/undeprecate HTTP/1.1
> User-Agent: curl/7.19.7 (universal-apple-darwin10.0) libcurl/7.19.7 OpenSSL/0.9.8r zlib/1.2.3
> 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: Sun, 12 Feb 2012 17:11:43 GMT
* Connection #0 to host localhost left intact
* Closing connection #0
```

Step 10:

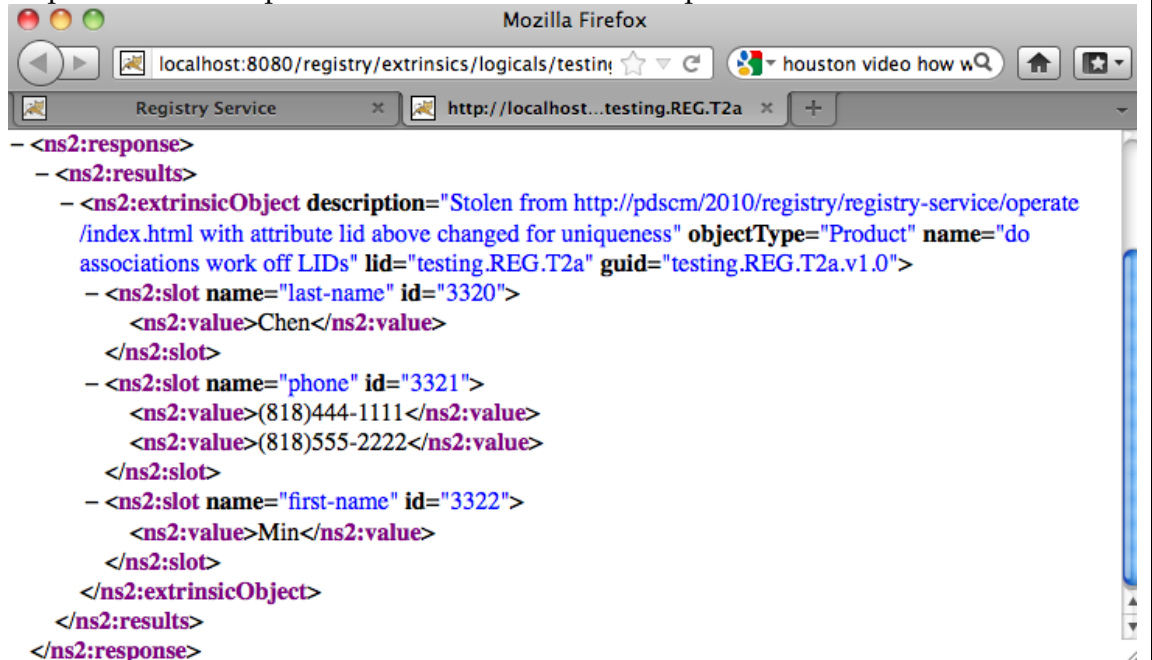


Step 11:

```

* About to connect() to localhost port 8080 (#0)
* Trying 127.0.0.1... connected
* Connected to localhost (127.0.0.1) port 8080 (#0)
> POST /registry/extrinsics/logicals HTTP/1.1
> User-Agent: curl/7.19.7 (universal-apple-darwin10.0) libcurl/7.19.7 OpenSSL/0.9.8r zlib/1.2.3
> Host: localhost:8080
> Accept: */*
> Content-type:application/xml
> Content-Length: 647
< HTTP/1.1 200 OK
< Server: Apache-Coyote/1.1
< Content-Type: application/xml
< Content-Length: 0
< Date: Sun, 12 Feb 2012 17:13:38 GMT
* Connection #0 to host localhost left intact
* Closing connection #0
    
```

Step 12: Same as step 3 but with different values for phone numbers



Comments	<a href="http://oodt.jpl.nasa.gov/jira/browse/PDS-47">http://oodt.jpl.nasa.gov/jira/browse/PDS-47</a> After the initial registration, product's status is "Unknown". It used to be "Submitted"
Date of Testing	
Test Personnel	

Test Case ID	REG.T7 *not ready for build 2b
Description	Enable replication of registry contents
Test Steps	

Test Results	
Comments	
Date of Testing	
Test Personnel	

Test Case ID	REG.T8 *not ready for build 2b
Description	Verify registry contents
Test Steps	
Test Results	
Comments	
Date of Testing	
Test Personnel	

Test Case ID	REG.T9
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.                      Step 3 is configurable. 500000 registrations (as shown) may take 3 days.</p> <ol style="list-style-type: none"> <li>1. cd testDir/bin</li> <li>2. ./stressTest.py</li> <li>3. ./stressTest.py -v -n500000 &gt; ../out.txt</li> <li>4. grep Time ../out.txt</li> </ol>
Test Results	<p>Step 2:</p> <pre> stressTesting.T000000.v1.0 deleted stressTesting.T000001.v1.0 deleted stressTesting.T000002.v1.0 deleted Delete 3 done. Time(sec): avg=0.263 median=0.081 stdDev=0.26655 sum=0.8 Regstr 3 done. Time(sec): avg=0.016 median=0.017 stdDev=0.00219 sum=0.0 &lt;?xml version="1.0" encoding="UTF-8" standalone="yes"?&gt;&lt;ns2:response xmlns:ns2="http://registry.pds.nasa.gov"&gt;&lt;ns2:results&gt;&lt;ns2:extrinsicObject description="Stolen from http://pdscm/2010/registry/registry-service/operate/index.html with attribute lid above changed for uniqueness" objectType="Product" name="Stress The Registry " lid="stressTesting.T000000" guid="stressTesting.T000000.v1.0"&gt;&lt;ns2:slot name="last-name" id="214451"&gt;&lt;ns2:value&gt;Doe&lt;/ns2:value&gt;&lt;/ns2:slot&gt;&lt;ns2:slot name="cannotPossibleBeAnExistingSlot" id="214452"&gt;&lt;ns2:value&gt;cannot possibly be an existing value&lt;/ns2:value&gt;&lt;/ns2:slot&gt;&lt;ns2:slot name="first-name" id="214453"&gt;&lt;ns2:value&gt;John&lt;/ns2:value&gt;&lt;/ns2:slot&gt;&lt;ns2:slot name="phone" id="214454"&gt;&lt;ns2:value&gt;(818)777-7777&lt;/ns2:value&gt;&lt;ns2:value&gt;(818)888- 8888&lt;/ns2:value&gt;&lt;/ns2:slot&gt;&lt;/ns2:extrinsicObject&gt;&lt;/ns2:results&gt;&lt;/ns2:response&gt; &lt;?xml version="1.0" encoding="UTF-8" standalone="yes"?&gt;&lt;ns2:response xmlns:ns2="http://registry.pds.nasa.gov"&gt;&lt;ns2:results&gt;&lt;ns2:extrinsicObject description="Stolen from http://pdscm/2010/registry/registry-service/operate/index.html with attribute lid above changed for uniqueness" objectType="Product" name="Stress The Registry " lid="stressTesting.T000001" guid="stressTesting.T000001.v1.0"&gt;&lt;ns2:slot name="last-name" id="214455"&gt;&lt;ns2:value&gt;Doe&lt;/ns2:value&gt;&lt;/ns2:slot&gt;&lt;ns2:slot name="cannotPossibleBeAnExistingSlot" id="214456"&gt;&lt;ns2:value&gt;cannot possibly be an existing value&lt;/ns2:value&gt;&lt;/ns2:slot&gt;&lt;ns2:slot name="first-name" id="214457"&gt;&lt;ns2:value&gt;John&lt;/ns2:value&gt;&lt;/ns2:slot&gt;&lt;ns2:slot name="phone" id="214458"&gt;&lt;ns2:value&gt;(818)777-7777&lt;/ns2:value&gt;&lt;ns2:value&gt;(818)888- 8888&lt;/ns2:value&gt;&lt;/ns2:slot&gt;&lt;/ns2:extrinsicObject&gt;&lt;/ns2:results&gt;&lt;/ns2:response&gt; &lt;?xml version="1.0" encoding="UTF-8" standalone="yes"?&gt;&lt;ns2:response xmlns:ns2="http://registry.pds.nasa.gov"&gt;&lt;ns2:results&gt;&lt;ns2:extrinsicObject description="Stolen from http://pdscm/2010/registry/registry-service/operate/index.html with attribute lid above changed for uniqueness" objectType="Product" name="Stress The Registry " lid="stressTesting.T000002"                     </pre>

	<pre> guid="stressTesting.T000002.v1.0"&gt;&lt;ns2:slot name="last-name" id="214459"&gt;&lt;ns2:value&gt;Doe&lt;/ns2:value&gt;&lt;/ns2:slot&gt;&lt;ns2:slot name="cannotPossibleBeAnExistingSlot" id="214460"&gt;&lt;ns2:value&gt;cannot possibly be an existing value&lt;/ns2:value&gt;&lt;/ns2:slot&gt;&lt;ns2:slot name="first-name" id="214461"&gt;&lt;ns2:value&gt;John&lt;/ns2:value&gt;&lt;/ns2:slot&gt;&lt;ns2:slot name="phone" id="214462"&gt;&lt;ns2:value&gt;(818)777-7777&lt;/ns2:value&gt;&lt;ns2:value&gt;(818)888- 8888&lt;/ns2:value&gt;&lt;/ns2:slot&gt;&lt;/ns2:extrinsicObject&gt;&lt;/ns2:results&gt;&lt;/ns2:response&gt; View    3 done. Time(sec): avg=0.009 median=0.009 stdDev=0.00035 sum=0.0 Delete 501000 done. Time(sec): avg=0.205 median=0.196 stdDev=0.08713 sum=102548.0 Regstr 501000 done. Time(sec): avg=0.093 median=0.091 stdDev=0.03463 sum=46472.3 View  106227 done. Time(sec): avg=1.454 median=1.452 stdDev=0.05708 sum=154459.2 View  394773 FAIL. Time(sec): avg=0.012 median=0.009 stdDev=0.09480 sum=4882.7                     </pre> <p>Step 4:</p>
Comments	Typically, each registration takes 0.1 seconds; deletion, 0.2; view, 0.1
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

Test Case ID	RPT.T1, RPT.T2, RPT.T3, RPT.T4, RPT.T5
Description	Various requirements regarding reporting
Test Steps	Commercial applications, in particular Sawmill, provide the functionality required. Verification of installation suffices.
Test Results	
Comments	
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

Test Case ID	SCH.T1
Description	Degrade gracefully on archaic browsers
Test Steps	
Test Results	
Comments	
Date of Testing	
Test Personnel	Richard Chen

Test Case ID	SCH.T2 *not ready for build 2b
Description	Comply with Section 508 and adhere to WCAG level A
Test Steps	
Test Results	
Comments	
Date of Testing	

Test Personnel	
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Test Case ID	SCH.T3
Description	Provide HTTP-based API to enter queries and return results
Test Steps	
Test Results	
Comments	
Date of Testing	
Test Personnel	

Test Case ID	SCH.T4 *not ready for build 2b
Description	Retrieve metadata to generate search indexes
Test Steps	
Test Results	
Comments	
Date of Testing	
Test Personnel	

Test Case ID	SCH.T5
Description	Search based on a sequence of open text keywords. Do so in a browser.
Test Steps	<p>Compare the PDS4 (<a href="http://pdsbeta.jpl.nasa.gov/tools/data-search">http://pdsbeta.jpl.nasa.gov/tools/data-search</a>) and the PDS3 (<a href="http://pds.nasa.gov">http://pds.nasa.gov</a>) results for the following searches:</p> <ol style="list-style-type: none"> <li>1. cassini spice</li> <li>2. cassini cda</li> <li>3. voyager plasma wave. In Mission results, click "Comet SL9/Jupiter Collision"</li> <li>4. mars digital elevation maps</li> <li>5. neptune</li> <li>6. jupiter images</li> </ol>
Test Results	<p>All searches complete successfully. Differences in results:</p> <ol style="list-style-type: none"> <li>1. PDS4 has 1 result; PDS3, 51.</li> <li>2. PDS3 has 1 extra result, the dataset for Cassini HRD. The reason may be that HRD's abstract says "HRD... is an independent part of the CDA instrument..."</li> <li>3. The database has 10 plasma wave spectrometer datasets for this mission. PDS4 has 4, the ones for Jupiter and Saturn. PDS3 has 6, the ones for Neptune and Uranus. No overlap. PDS3 additionally has a search tool of unknown appropriateness and 3 probably inappropriate ISS datasets, for their DATA_SET_DESCs have "Neither does the data set include ... Plasma Wave Spectrometer (PWS) image-formatted information."</li> <li>4. Apparently, "digital elevation map" is not a commonly used term. PDS4 has 8 results, all instruments. PDS3 has 28 results: 8 instruments and 20 datasets. Many datasets are good: VO and MRO Digital Terrain Models. Most are</li> </ol>

	<p>probably not, as they probably matched because their dataset text had some form of “digital”, “elevation”, and “map”. Oddly, the 8 instruments do not match. The two sets are about equally bad (if you want DEMs)</p> <p>5. In terms of non-intersecting results:  PDS4 has right: 2 search tools, 8 targets, 10 instruments, 1 dataset (EAR-...).  PDS4 has 1 wrong mission (NH)  PDS3 has 1 maybe right Triton dataset (VG2-NSA-RSS-...).  PDS3 has 13 wrong datasets (1 VG2-U-UVS..., 6 NH-..., 4 MGS-..., 2 EAR-...), 1 wrong instrument (on NH)</p> <p>6. PDS4 has 13 datasets. PDS3 has 89, which is definitely more correct.  In terms of other non-intersecting results:  PDS4 has 1 right search tools (Opus, listed 3 times), 1 mission (NH),  PDS4 has 1 wrong mission (NEAR)  PDS3 has 2 right instrument hosts (Galileo, Cassini)  PDS3 has 1 wrong search tool (Comet Data Searcher), 1 wrong mission (EPOXI), 1 probably wrong mission (NEXT)</p>
Comments	<p>#5 leads to what may be a bug. On the first results page, click “Target” in the left column. Though there are 14 results, only 10 are accessible. Even on the original page with 68 results for “neptune”, only 1-10 and 51-60 were directly accessible.</p> <p><a href="https://oodt.jpl.nasa.gov/jira/browse/PDS-56">https://oodt.jpl.nasa.gov/jira/browse/PDS-56</a></p>
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen

Test Case ID	SCH.T6, SCH.T7
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 (<a href="http://pdsbeta.jpl.nasa.gov/tools/data-search">http://pdsbeta.jpl.nasa.gov/tools/data-search</a>) and the PDS3 (<a href="http://pds.nasa.gov">http://pds.nasa.gov</a>) results for the searches below. Clicking on the facets in the left column makes the comparison easier</p> <ol style="list-style-type: none"> <li>1. mission: mars global surveyor</li> <li>2. target:mercury</li> </ol>
Test Results	<ol style="list-style-type: none"> <li>1. In terms of non-intersecting results:  PDS4 has 1 right missions (MGS),  PDS4 has 1 maybe wrong mission (MRO),  PDS3 has 14 right datasets (14 MGS, 1 MULTI)  PDS3 has 7 wrong datasets (2 MER, 1 MEX, 1 MPFL, 1 MRO, 2 ODY)</li> <li>2. In terms of non-intersecting results  PDS4 has 2 obsoleted datasets MESS-...-RAWDATA-V1.0</li> </ol> <p><a href="https://oodt.jpl.nasa.gov/jira/browse/PDS-57">https://oodt.jpl.nasa.gov/jira/browse/PDS-57</a></p>
Comments	Probably a bug to return obsoleted datasets
Date of Testing	
Test Personnel	

Test Case ID	SCH.T8 *not ready for build 2b
Description	Support configuration on indexes that differ by data type, data conversion, index generation methodology, and metadata maintenance for result annotation
Test Steps	
Test Results	
Comments	
Date of Testing	
Test Personnel	

Test Case ID	SCH.T9
Description	Capture metrics on search index usage and contents
Test Steps	
Test Results	
Comments	
Date of Testing	
Test Personnel	

Test Case ID	SEC.T1, SEC.T2, SEC.T3, SEC.T4
Description	Various requirements regarding security
Test Steps	(From <a href="http://pds-engineering.jpl.nasa.gov/pds2010/development/1.2.0/security/">http://pds-engineering.jpl.nasa.gov/pds2010/development/1.2.0/security/</a> ) The Security Service provides the authentication and authorization functions for the PDS 2010 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.). 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).
Test Results	
Comments	
Date of Testing	2012 Feb 27
Test Personnel	Richard Chen



## 4 Anomalies

The JIRA issue 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 2a found 3 major, 2 minor anomalies, 3 improvements

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### 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>

<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>

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

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

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

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

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

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

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

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### 4.2 Major Issues

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### **4.3 Open anomalies**

See 5.1 above.

## 5 Test Data

File PDS4test.build2a.zip from the “Test Procedures Input” link at <http://pds-engineering.jpl.nasa.gov/index.cfm?pid=145&cid=175> has all test data.

## Appendix A: Acronyms

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