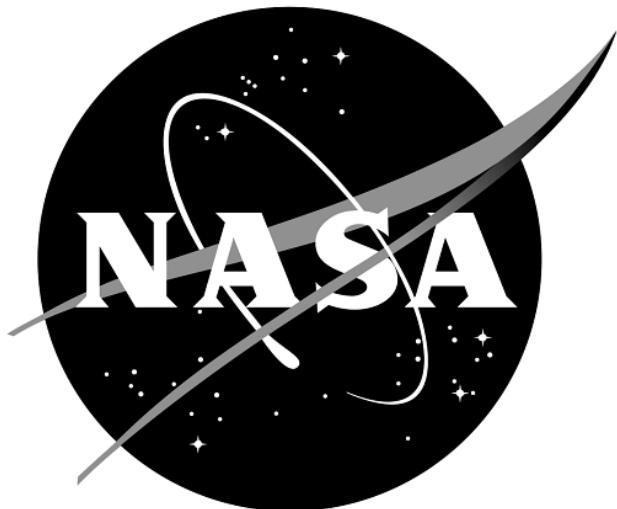


Plan Document
NASA Planetary Data System
PDS4 System
Build 11.1 Test Document



Change Log

Revision	Date	Description	Author
Draft		Initial draft release.	
1c	May 16, 2011	Modified many tests to work with build 1c of Harvest and Registry. Other minor revisions.	Richard Chen
1d	Oct 24, 2011	Updated for build 1d	Richard Chen
2a	Nov 11, 2011	Updated for build 2a	Richard Chen
2b	Feb 28, 2012	Updated for build 2b	Richard Chen
2b.1	Mar 7, 2012	Re-added HVT.T3, expanded SRCH.T5	Richard Chen
2c	Jul 17, 2012	Updated for build 2c	Richard Chen
3a	Oct 26, 2012	Added BNLD.T1 to .T4	Richard Chen
3b	Apr 09, 2013	Added AAFUNCTION.*	Richard Chen
3b.1	Aug 30, 2013	Incorporated JIRA resolutions	Richard Chen
3b.2	Sep 15, 2013	Cleaned up and removed not applicable test procedures	Richard Chen, Emily Law
4a	Dec. 05, 2013	<p>Incorporated PDS4ORR-RFA1's recommendations by:</p> <ul style="list-style-type: none"> • folding the test plan into this (test procedures and test results) document. • listing the requirements tested in each test case and their pass/fail status • adding version numbers in list of software components tested • indicating for each JIRA issue: the software build under which it was discovered, its severity, the test case demonstrating, and its description. • adding "pass", "fail", or "skip" to the requirements traceability matrix <p>Added tests TPRT.1, SCMA.1 to test transport service and schema.</p> <p>Removed redundant tests AATESTME.*.</p>	Richard Chen, Emily Law
4b'	Apr 14, 2014	Replaced generate0.7.0 with 0.7.1	Richard Chen
5a	Oct 27, 2014	Added PRV.3, TPRT.4. Changed HVT.4 to GEN.2. Changed TPRT.3 to test more of transport-proxy. Deleted TPRT.2 after folding its step into TPRT.1	Richard Chen
5b	Apr 19, 2015	Rewrote TPRT.4 to test transport-proxy correctly. Much work on formatting issues in Generate, Transform, and Transport. Added SRCH.8	Richard Chen
6a	Oct 19, 2015	Added HVT.7, REG.10. Modified HVT.5, PRG.1, PRT.1, PRV.1, PRV.3, PRV.5, PRV.6, REG.3, REG.9, SRCH.5, SRCH.8, TPRT.1, TPRT.3	Richard Chen

6b	Apr 29, 2016	Added PRP.1, PRT.2, PRT.3, PRV.7, TPRT.5	Richard Chen
7a	Oct 24, 2016	Added MOD.1, Changed DSV.1 to POR.1, added POR.2	Richard Chen
7b	Apr 17, 2017	Added HVT.8	Richard Chen
8a	Oct 23, 2017	Added harvest-search, search-analytics	Richard Chen
8b	Apr 23, 2018	Added PRI.1, PRS.1, TPRT.6. Removed obsolete PRV.6	Richard Chen
9a	Oct 30, 2018	Removed SRCH.9 and merged it into POR.1	Richard Chen
9b	Jun 12, 2019	Removed REG.10	Richard Chen
10a	Nov 11, 2019	Removed AAFUNCTION.*, CTLG.3, POR.*, PRP.1, PRS.1, REG.*, SRCH.* Renamed AAFUNCTION.1 to REQ.4, GEN.* to REQ.*, HVT.[5-8] to HVT.[4-7], MOD.1 to LDD.1, PRG.1 to GEN.1, PRI.1 to VIEW.1, PRT.* to XFRM.*, PRV.* to VAL.*, SCMA.1 to REQ.1, SEC.1 to REQ.2	Richard Chen
10b	May 6, 2020	Replaced Section 4's anomaly tracking with RDD referencing. Restored deleted tests. Added DEEP.1. Renamed PRP.1 to VIEW.2, SRCH.8 to SRCH.4, PRS.1 to XFRM.4, REQ.1 to SCMA.1, LDD.1 to SCHMA.2, REQ.7 to REQ.1, POR.1 to SRCH.8, HVT.* to HVTOLD.*, REG.* to REGOLD.*	Richard Chen
11.0	Dec 4, 2020	Added DOI.*. Rewrote HVT.* for new harvest/registry. Added 1 test per issue for DEEP, SCMA, VAL. Dumped Section 5, Requirements Traceability, as those appear in Section 4. Removed Section 3.4, unchanged software.	Richard Chen Gary Chen
11.1	Jun 7, 2021	Added tests for DOI-API, and PDS-WDS-WEB. Added tests that uniquely address defects and enhancements for each tool.	Richard Chen Gary Chen

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1 Introduction

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

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

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

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

PDS previously maintained two separate documents:

- the Integration and Test Plan
- the Test Procedures and Report

Because the latter grew to encompass most of the former, this document merges the two.

1.1 Purpose

This Test Document 1) defines specific tests that ensure that the new system and the PDS4 standards comply with requirements and meet customers' needs, and 2) reports results of the tests to verify and validate that the PDS4 system deployed for Build 11.1 is free of critical defects. This document describes the integration and test activities and contains test cases that demonstrate compliance to requirements. The test scenarios verify and validate the system components and data products in an integrated manner. A test traceability matrix in section **Error! Reference source not found.** traces these scenarios to the new PDS4 system design requirements, which in turn can be traced to high-level PDS requirements.

1.2 Scope

Testing for build 11.1 is based upon the “Release Description Document (build 11.1), software changes” (RDD), available at

<https://nasa-pds.github.io/releases/11.1/rdd.html>

The modules tested in build 11.1:

- Harvest 3.4.0 (installed with pds-registry-app 0.3.1)
- LDDTool 12.1.0
- Registry-manager 4.0.2 (installed with pds-app-registry 0.2.1)
- Validate 2.0.6
- pds-deep-archive 0.4.0
- pds-doi-service 1.1.1
- mi-label 1.1.3
- pds-wds-web

These modules have not changed for this build and are not being tested:

- Catalog
- Data Dictionary Search
- Data Search
- Data Set View
- Design
- Filter
- Generate
- Harvest 2.5.2 (EN version)
- Harvest PDAP
- JParser
- Model/Model DM, Model/Model Ontology
- PDS-View
- Phone Book Search
- Product Service
- Registry 1.15.0 (EN version)
- Report Manager
- Search User Interface
- Storage Service
- Security
- Tool Registry
- Tracking Service
- Transform
- Transport

1.3 Document Revision

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

1.4 Test Approach

The PDS4 build structure is organized such that the system can be tested and verified early on to ensure seamless transitions. The builds will ensure there is a coordinated testing and deployment of functionality coupled with upgrades of the data standards.

Build 11.1 Integration testing is the execution and management of tests by the Engineering Node to ensure that the release of Build 11.1 meets the intended functionality. The process of verification testing includes the selection of verification items, integration, and regression testing. Any functionality that is added to the system is treated as a new verification item.

1.5 Applicable Documents

1.5.1 Controlling Documents

- [1] Planetary Data System Strategic Roadmap 2006 - 2016, February 2006.
- [2] Planetary Data System Level 1, 2 and 3 Requirements, March 26, 2010.

1.5.2 Referenced Documents

- [3] PDS4 Project Plan, July 2013.
- [4] PDS4 Operations Concept, September 2013.
- [4] System Architecture Specification, September 2013.
- [5] General System Requirements, September 2013.
- [6] Software Requirements and Design, 2013.
- [7] PDS4 Standards Documents, 2014.
- [8] <https://github.com/NASA-PDS/pds-deep-archive/issues?q=label%3Arequirement>

2 Executive Summary

The testing documented herein substantiates that all tested tools and services meet Build 11.1 requirements as specified in their Software Requirements and Design documents.

# of tests performed	# of tests passed	# of tests failed	# of high priority anomalies
100	95	5	0

[Section 3.2](#) tests all new or modified software modules. Its test sequences cover level 4 and 5 requirements for completeness. The sequences:

- [DEEP.*](#): Generate Deep Archive metadata, i.e. AIPs and SIPs
- [DOI.*](#): reserve, draft, and release DOIs for bundles, collections, documents
- [HVT.*](#): the Data Nodes' harvest ingests labels into a DN registry
- [SCMA.*](#): Schema 1.F.0.0 is validated externally, and LDDtool creates local data dictionaries.
- [VAL.*](#): Validate PDS4 labels and data.

Issue ID	Type	Result	Test ID	Description
hvt#37	R	fail	docs	Tool package includes default configuration
Validate_260	D	fail	VAL.9	Missing documentation about deprecated flags
pds-doi-service_140	I	fail	DOI.11	Update submission to OSTI to handle the removal of a field from the OSTI metadata
pds-doi-service_177	I	fail	DOI.21	As an API user I want to filter on lidvids with wildcards
pds-wds-web-12	I	fail	WDS-3	Show screenshot of app-bar in README

Column 2: type of issue. I: improvement D: defect R: requirement

[Section 4](#) lists the status of all issues described in the [Build 11.1 RDD](#).

Briefly, 95 issues were verified as passed,

5 issues were marked as failed (1 in VAL, 2 in DOI-Service, 1 in HVT, and 1 in WDS-WEB), all are minor issues. Hvt#37, Validate_260 and pds-wds-web-12 were not updating documentation. pds-doi-service_140 has not been implemented yet, and pds-doi-service_177 works with “*” but not “?” for searching.

28 issues were skipped. Of which, 17 of them are internal to software development, 4 of them have not been implemented yet, and the remaining 7 have to do with checking documentation.

3 Test Cases, Procedures and Results

The following section defines the test cases and lists their results. These cover all level 5 requirements for PDS. Testing for build 11.1 covers changed functionality since build 10a.

3.1 Setup

The tests are organized upon the Release Description for build 11.1:

[Build 11.1 RDD](#)

The tests for build 11.1 in sections 3.2 and **Error! Reference source not found.** require the installation of the following PDS4 software, all accessible from the RDD URL above.

- **Harvest**
- **Registry**
- **LDDtool**
- **Validate**
- **pds-deep-archive**
- **pds-doi-cmd**

Other needed software:

- **python3**, for pds-deep-archive
- 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.

From https://pds-engineering.jpl.nasa.gov/content/build_11.1_it_deliverables , also download PDS4test.build11.1.tgz, the test input files. In the tests below, replace with appropriate values:

/Users/rchen/Desktop/test	directory where input files are extracted
/Users/rchen/PDS4tools	installation directory of the PDS4 software
http://localhost:9200	URL of the elasticsearch server

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

In the rest of this document, the Test Case IDs are all caps followed by a dot and a number, while the IDs of the issues in the RDD are also all caps but followed by a # and a number.

3.2 Testing of New/Modified Modules on macOS/Linux/Windows

These tests ensure complete verification and validation of Build 11.1 level 5 requirements of the new or modified modules. In each test case, # indicates a comment, usually linked to an RDD issue.

	<pre> 2021-05-12 16:53:22.287 INFO 56084 --- [main] partySourcedRequestMappingHandlerMapping : Mapped URL path [/api-docs] onto method [springfox.documentation.swagger2.web.Swagger2Controller#getDocumentation(String, HttpServletRequest)] 2021-05-12 16:53:22.463 WARN 56084 --- [main] ion\$DefaultTemplateResolverConfiguration : Cannot find template location: classpath:/templates/ (please add some templates or check your Thymeleaf configuration) 2021-05-12 16:53:22.522 INFO 56084 --- [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port(s): 8080 (http) with context path " 2021-05-12 16:53:22.522 INFO 56084 --- [main] d.s.w.p.DocumentationPluginsBootstrapper : Context refreshed 2021-05-12 16:53:22.538 INFO 56084 --- [main] d.s.w.p.DocumentationPluginsBootstrapper : Found 1 custom documentation plugin(s) 2021-05-12 16:53:22.599 INFO 56084 --- [main] s.d.s.w.s.ApiListingReferenceScanner : Scanning for api listing references 2021-05-12 16:53:22.806 INFO 56084 --- [main] g.n.pds.api.engineering.SpringBootMain : Started SpringBootMain in 3.226 seconds (JVM running for 3.63) 2021-05-12 16:58:07.398 INFO 56084 --- [nio-8080-exec-1] o.a.c.c.C.[Tomcat].[localhost].[/] : Initializing Spring DispatcherServlet 'dispatcherServlet' 2021-05-12 16:58:07.398 INFO 56084 --- [nio-8080-exec-1] o.s.web.servlet.DispatcherServlet : Initializing Servlet 'dispatcherServlet' 2021-05-12 16:58:07.403 INFO 56084 --- [nio-8080-exec-1] o.s.web.servlet.DispatcherServlet : Completed initialization in 5 ms swagger-ui.html 2021-05-12 16:58:32.154 INFO 56084 --- [nio-8080-exec-1] g.n.p.a.e.c.MyProductsApiBareController : accept value is application/json 2021-05-12 16:58:32.204 INFO 56084 --- [nio-8080-exec-1] lasticSearchRegistrySearchRequestBuilder : q value: null 2021-05-12 16:58:32.249 INFO 56084 --- [nio-8080-exec-1] lasticSearchRegistrySearchRequestBuilder : request elasticSearch :SearchRequest{searchType=QUERY_THEN_FETCH, indices=[registry], indicesOptions=IndicesOptions[ignore_unavailable=false, allow_no_indices=true, expand_wildcards_open=true, expand_wildcards_closed=false, expand_wildcards_hidden=false, allow_aliases_to_multiple_indices=true, forbid_closed_indices=true, ignore_aliases=false, ignore_throttled=true], types[], routing=null, preference=null, requestCache=null, scroll=null, maxConcurrentShardRequests=0, batchedReduceSize=512, preFilterShardSize=null, allowPartialSearchResults=null, localClusterAlias=null, getOrCreateAbsoluteStartMillis=-1, ccsMinimizeRoundtrips=true, source={"from":0,"size":100,"timeout":"60s","query":{"bool":{"must":[{"term":{"product_class":{"value":"Product_Bundle","boost":1.0}}}], "adjust_pure_negative":true,"boost":1.0}}}} 2021-05-12 17:00:34.323 INFO 56084 --- [nio-8080-exec-4] g.n.p.a.e.c.MyProductsApiBareController : accept value is application/json 2021-05-12 17:00:34.324 INFO 56084 --- [nio-8080-exec-4] lasticSearchRegistrySearchRequestBuilder : q value: null 2021-05-12 17:00:34.324 INFO 56084 --- [nio-8080-exec-4] lasticSearchRegistrySearchRequestBuilder : request elasticSearch :SearchRequest{searchType=QUERY_THEN_FETCH, indices=[registry], indicesOptions=IndicesOptions[ignore_unavailable=false, allow_no_indices=true, expand_wildcards_open=true, expand_wildcards_closed=false, expand_wildcards_hidden=false, allow_aliases_to_multiple_indices=true, forbid_closed_indices=true, ignore_aliases=false, ignore_throttled=true], types[], routing=null, preference=null, requestCache=null, scroll=null, maxConcurrentShardRequests=0, batchedReduceSize=512, preFilterShardSize=null, allowPartialSearchResults=null, localClusterAlias=null, getOrCreateAbsoluteStartMillis=-1, ccsMinimizeRoundtrips=true, source={"from":0,"size":100,"timeout":"60s","query":{"bool":{"must":[{"term":{"product_class":{"value":"Product_Bundle","boost":1.0}}}], "adjust_pure_negative":true,"boost":1.0}}}} </pre>
Step 4:	<p>Elasticsearch URL: http://localhost:9200 Deleting index registry Deleting index registry-dd Done</p>
Step 5:	<p>Elasticsearch URL: http://localhost:9200 Creating index... Index: registry Schema: /Users/rchen/PDS4tools/registry-manager/elastic/registry.json Shards: 1 Replicas: 0 Done Creating index... Index: registry-refs Schema: /Users/rchen/PDS4tools/registry-manager/elastic/refs.json Shards: 1 Replicas: 0 Done</p>

```

Creating index...
Index: registry-dd
Schema: /Users/rchen/PDS4tools/registry-manager/elastic/data-dic.json
Shards: 1
Replicas: 0
Done
Loading file: /Users/rchen/PDS4tools/registry-manager/elastic/data-dic-data.jar:dd.json
Loaded 2505 document(s)

```

Step 6:

Swagger UI

localhost:8080/swagger-ui.html#/bundles

408 request time out

Curl

```
curl -X GET --header 'Accept: application/json' 'http://localhost:8080/bundles?limit=100&only-summary=false'
```

Request URL

```
http://localhost:8080/bundles?limit=100&only-summary=false
```

Request Headers

```
{
  "Accept": "application/json"
}
```

Response Body

```
{
  "summary": {}
}
```

Response Code

```
200
```

Response Headers

```
{
  "connection": "keep-alive",
  "content-type": "application/json",
  ...
}
```

Step 7:

localhost:9200/_status

localhost:9200

JSON Raw Data Headers

```

name: "MT-207164"
cluster_name: "elasticsearch"
cluster_uuid: "pgx0JpJ3UmCv78502100w"
version:
  number: "7.8.1"
  build_flavor: "default"
  build_type: "tar"
  build_hash: "b5ca9c58fb664ca8bf9e4057fc229b3396bf3a89"
  build_date: "2020-07-21T16:40:44.668009Z"
  build_snapshot: false
  lucene_version: "8.5.1"
  minimum_wire_compatibility_version: "6.8.0"
  minimum_index_compatibility_version: "6.0.0-beta1"
tagline: "You Know, for Search"

```

Test Case ID	HVT.1
Description	Harvest tool finds all PDS4 labels in a given directory tree, extracts key metadata from each label, and exports the metadata to a .json file. Registry-manager loads the .json file into elasticsearch's database. Registry-api queries elasticsearch
Requirements	PASS
Success Criteria	Metadata from PDS4 labels shows up correctly
Test Steps	<p>1. Clean database as described in HVT.0 2. cd /Users/rchen/Desktop/test/testHvt 3. harvest -c policy/harvest.geo_phx_ra.xml 4. registry-manager load-data -dir /tmp/harvest/out 5. In browser, http://localhost:9200/registry/_search?q=*</p> <p>Show update of registered artifacts</p> <p>6. In browser, http://localhost:9200/registry/_search?q=lid:urn:nasa:pds:phx_ra 7. gunzip geo_phx_ra/bundle_weird.xml.gz 8. diff geo_phx_ra/bundle.xml geo_phx_ra/bundle_weird.xml 9. gzip geo_phx_ra/bundle.xml 10. Repeat step 3 11. Repeat step 4 12. Repeat step 6. Note new title matches diff's result 13. gzip geo_phx_ra/bundle_weird.xml; gunzip geo_phx_ra/bundle.xml.gz</p> <p>Show deletion of registered artifacts</p> <p>14. registry-manager delete-data -lid urn:nasa:pds:phx_ra 15. Repeat step 6 16. registry-manager delete-data -all 17. Repeat step 5</p>
Test Results	<p>Step 3:</p> <pre>[SUMMARY] Output directory: /tmp/harvest/out [SUMMARY] Output format: json [SUMMARY] Reading configuration from /Users/rchen/Desktop/test/testHvt/policy/harvest.geo_phx_ra.xml [WARN] Registry is not configured [INFO] Processing directory: /Users/rchen/Desktop/test/testHvt/geo_phx_ra ... [INFO] Processing /Users/rchen/Desktop/test/testHvt/geo_phx_ra/xml_schema/collection.xml [SUMMARY] Summary: [SUMMARY] Skipped files: 0 [SUMMARY] Processed files: 173 [SUMMARY] File counts by type: [SUMMARY] Product_Browse: 38 [SUMMARY] Product_Bundle: 1 [SUMMARY] Product_Collection: 5 [SUMMARY] Product_Context: 4 [SUMMARY] Product_Document: 4 [SUMMARY] Product_Observational: 120 [SUMMARY] Product_XML_Schema: 1 [SUMMARY] Package ID: 06ba2fbb-cccd-4e1c-97ae-0106bcfae396</pre> <p>Step 4:</p> <pre>Elasticsearch URL: http://localhost:9200 Index: registry Updating schema with fields from /tmp/harvest/out/fields.txt Updated 0 fields Loading file: /tmp/harvest/out/refs-docs.json Loaded 5 document(s) Loading file: /tmp/harvest/out/registry-docs.json Loaded 173 document(s)</pre> <p>Step 5: note the 173 and that a Product_Observational has been ingested</p>



```
localhost:9200/registry/_search?q=*
80% ... 🌐 ⚡

JSON Raw Data Headers
Save Copy Collapse All Expand All Filter JSON

hits:
  total:
    value: 173
    relation: "eq"
    max_score: 1
  hits:
    0: ...
    1: ...
    2: ...
    3: ...
    4: ...
    5:
      _index: "registry"
      _type: "_doc"
      _id: "urn:nasa:pds:phx_ra:data_derived:sol101a::1.0"
      _score: 1
      _source:
        lid: "urn:nasa:pds:phx_ra:data_derived:sol101a"
        vid: 1
        lidvid: "urn:nasa:pds:phx_ra:data_derived:sol101a::1.0"
        title: "Phoenix Robotic Arm Derived Product: sol101a"
        product_class: "Product_Observational"
        _package_id: "06ba2fb2-cc2d-4e1c-97ae-0106bcfae396"
        ref_lid_document: "urn:nasa:pds:phx_ra:document:ra_dataset"
        ref_lid_instrument: "urn:nasa:pds:context:instrument:ra.phx"
        ref_lid_instrument_host: "urn:nasa:pds:context:instrument_host:spacecraft.phx"
        ref_lid_investigation: "urn:nasa:pds:context:investigation:mission.phoenix"
        ref_lid_target: "urn:nasa:pds:context:target:planet.mars"
        ops:Data_File_Info/ops:creation_date_time: "2010-03-08T23:59:10Z"
        ops:Data_File_Info/ops:file_name: "sol101a.csv"
        ops:Data_File_Info/ops:file_ref: "/Users/rchen/Desktop/test/testHvt/geo_phx_ra/data_derived/sol101a.csv"
        ops:Data_File_Info/ops:file_size: "1127478"
        ops:Data_File_Info/ops:md5_checksum: "751caa0d223047e5a76acfa61da98157"
        ops:Data_File_Info/ops:mime_type: "text/plain"
        ops:Harvest_Info/ops:node_name: "PDS_GEO"
        ops:Label_File_Info/ops:creation_date_time: "2019-10-17T20:22:54Z"
        ops:Label_File_Info/ops:file_name: "sol101a.xml"
        ops:Label_File_Info/ops:file_ref: "/Users/rchen/Desktop/test/testHvt/geo_phx_ra/data_derived/sol101a.xml"
        ops:Label_File_Info/ops:file_size: "8243"
        ops:Label_File_Info/ops:md5_checksum: "1a57fdd5de32cd2fd810e3c140fa8c6c"
    6:
      _index: "registry"
      _type: "_doc"
      _id: "urn:nasa:pds:phx_ra:data_derived:sol033c::1.0"
      _score: 1
```

Step 6:

localhost:9200/registry/_search?q=id:urn\:nasa

hits:

- total:**
 - value:** 1
 - relation:** "eq"
 - max_score:** 4.7535896
- hits:**
 - 0:**
 - _index:** "registry"
 - _type:** "_doc"
 - _id:** "urn:nasa:pds:phx_ra::1.0"
 - _score:** 4.7535896
 - _source:**
 - lid:** "urn:nasa:pds:phx_ra"
 - vid:** 1
 - lidvid:** "urn:nasa:pds:phx_ra::1.0"
 - title:** "Phoenix Robotic Arm Data Set"
 - product_class:** "Product_Bundle"
 - _package_id:** "06ba2fbb-ccd2-4e1c-97ae-0106bcfae396"
 - ref_lid_collection:**
 - 0:** "urn:nasa:pds:phx_ra:context"
 - 1:** "urn:nasa:pds:phx_ra:data_derived"
 - 2:** "urn:nasa:pds:phx_ra:data_test"
 - 3:** "urn:nasa:pds:phx_ra:document"
 - ref_lid_collection_secondary:** "urn:nasa:pds:system_bundle:xml_schema"
 - ref_lid_instrument:** "urn:nasa:pds:context:instrument:ra.phx"
 - ref_lid_instrument_host:**
 - ref_lid_target:** "urn:nasa:pds:context:instrument_host:spacecraft."
 - ops:Harvest_Info/ops:node_name:** "PDS_GEO"
 - ops:Label_File_Info/ops:creation_date_time:** "2019-10-17T20:22:14Z"
 - ops:Label_File_Info/ops:file_name:** "bundle.xml"
 - ops:Label_File_Info/ops:file_ref:** "/Users/rchen/Desktop/test/testHvt/geo_phx_ra/bun
 - ops:Label_File_Info/ops:file_size:** "5472"
 - ops:Label_File_Info/ops:md5_checksum:** "h31740RQrRef0h7547866e82c2cf65f"

Step 8:
12c12
< <title>Phoenix Robotic Arm Data Set</title>

> <title>Phoenix Robotic Arm Data Set WEIRD</title>

Step 11: Output just like Step 3's except a different last line
[SUMMARY] Package ID: a09f65f5-2d6c-4068-b35a-9205a9b6498f

Step 12: Note the "WEIRD" in title

localhost:9200/registry/_search?q=lid:urn\;nasa 80%

JSON Raw Data Headers

Save Copy Collapse All Expand All Filter JSON

```

{
  "hits": {
    "total": {
      "value": 1,
      "relation": "eq",
      "max_score": 4.7535896
    },
    "hits": [
      {
        "0": {
          "_index": "registry",
          "_type": "_doc",
          "_id": "urn:nasa:pds:phx_ra::1.0",
          "_score": 4.7535896,
          "_source": {
            "lid": "urn:nasa:pds:phx_ra",
            "vid": 1,
            "lidvid": "urn:nasa:pds:phx_ra::1.0",
            "title": "Phoenix Robotic Arm Data Set WEIRD",
            "product_class": "Product_Bundle",
            "package_id": "a09f65f5-2d6c-4068-b35a-9205a9b6498f",
            "ref_lid_collection": [
              "urn:nasa:pds:phx_ra:context",
              "urn:nasa:pds:phx_ra:data_derived",
              "urn:nasa:pds:phx_ra:data_test",
              "urn:nasa:pds:phx_ra:document",
              "urn:nasa:pds:system_bundle:xml_schema",
              "urn:nasa:pds:context:instrument:ra.phx",
              "urn:nasa:pds:context:instrument_host:spacecraft.phx",
              "urn:nasa:pds:context:instrument_host:target:planet.mars"
            ],
            "ref_lid_instrument": "PDS_GEO",
            "ref_lid_instrument_host": "2020-04-22T07:33:34Z",
            "ops:Harvest_Info/ops:node_name": "bundle_weird.xml",
            "ops:Label_File_Info/ops:creation_date_time": "/Users/rchen/Desktop/test/testHvt/geo_phx_ra/bundle_w",
            "ops:Label_File_Info/ops:file_ref": "5478",
            "ops:Label_File_Info/ops:file_size": "6875bfdd7a609c7a028b601a342c8b4c"
          }
        }
      }
    ]
  }
}

```

Step 14:
 Elasticsearch URL: http://localhost:9200
 Index: registry
 LID: urn:nasa:pds:phx_ra
 Deleted 1 document(s) from registry index
 Deleted 0 document(s) from registry-refs index

Step 15:

	JSON Raw Data Headers Save Copy Collapse All Expand All <input type="text"/> Filter JSON
	<pre> took: 3 timed_out: false ▶ _shards: total: 1 successful: 1 skipped: 0 failed: 0 ▶ hits: ▶ total: value: 0 relation: "eq" max_score: null hits: [] </pre>

Step 16:

Elasticsearch URL: http://localhost:9200
 Index: registry
 Delete all documents
 Deleted 172 document(s) from registry index
 Deleted 5 document(s) from registry-refs index

Step 17: same as Step 16

Comments	Results met success criteria
Date of Testing	2021.05.18
Test Personnel	Richard Chen

Test Case ID	HVT.2
Description	<p>Test various capabilities described in release 10b.</p> <p>HVT.1, by functioning correctly, tested hvt#11, hvt#13, hvt#15, hvt#16, hvt#20, PAR#1, PAR#2, regAp#18, regAp#22, regAp#23, regAp#25, regAp#27, regAp#28, regAp#31. Tested here: regAp#27, regAp#37, regAp#42. hvt#22 removed from testing</p>
Requirements	same as in HVT.1
Success Criteria	
Test Steps	<ol style="list-style-type: none"> 1. Clean database as described in HVT.0 2. cd /Users/rchen/Desktop/test/testHvt 3. registry-manager load-data -dir /tmp/harvest/out 4. In browser, http://localhost:9200/registry/_search?q=* 5. harvest -c policy/hvt22b.cfg 6. repeat Step 4 7. repeat Step 5 8. registry-manager load-data -help #part 2 of regAp#27

	9. run HVT.1 on a Windows machine #regAp#37 and regAp#42 NOTYET
Test Results	<p>Step 3: nothing was harvested, so nothing is registered</p> <p>Elasticsearch URL: http://localhost:9200 Index: registry Updating schema with fields from /tmp/harvest/out/fields.txt [ERROR] /tmp/harvest/out/fields.txt (No such file or directory)</p> <p>Step 4: hits/total/value is 0</p> <p>Step 5: hvt22b/hvt22.bad.xml has no LID so shouldn't get harvested</p> <p>[SUMMARY] Output directory: /tmp/harvest/out [SUMMARY] Output format: json [SUMMARY] Reading configuration from /Users/rchen/Desktop/test/testHvt/policy/hvt22b.cfg [WARN] Registry is not configured [INFO] Processing directory: /Users/rchen/Desktop/test/testHvt/hvt22b [INFO] Processing /Users/rchen/Desktop/test/testHvt/hvt22b/hvt22.xml [ERROR] Missing logical identifier: /Users/rchen/Desktop/test/testHvt/hvt22b/hvt22.bad.xml</p> <p>Step 6: same as Step 4</p> <p>Step 7: same as Step 5</p> <p>Step 8:</p> <pre>Usage: registry-manager load-data <options> Load data into registry index Required parameters: -dir <path> Harvest output directory to load Optional parameters: -auth <file> Authentication config file -es <url> Elasticsearch URL. Default is http://localhost:9200 -index <name> Elasticsearch index name. Default is 'registry' -updateSchema <y/n> Update registry schema. Default is 'yes'</pre> <p>Step 9: no PC available</p>
Comments	Results met success criteria IF harvest is supposed to not ingest anything if 1 bad file
Date of Testing	2021.05.19 except for step 9
Test Personnel	Richard Chen

Test Case ID	HVT.3
Description	Update archive status (pds-registry-app#16)
Requirements	same as in HVT.1
Success Criteria	Manipulate archive status of packages and individual products
Test Steps	<ol style="list-style-type: none"> Clean database as described in HVT.0 cd /Users/rchen/Desktop/test/testHvt harvest -c policy/regapp16.cfg #regAp#16 registry-manager load-data -dir /tmp/harvest/out registry-manager set-archive-status -status SAFED -packageId <fromLastStep> curl "http://localhost:9200/registry/_search?q=*" python -m json.tool grep archive_status registry-manager set-archive-status -status ARCHIVED -lidvid urn:nasa:pds:mars2020.meda:data_raw_env:we_c158_____eer_reset_____j::1.0 repeat Step 6
Test Results	<p>Step 3:</p> <p>[SUMMARY] Output directory: /tmp/harvest/out [SUMMARY] Output format: json [SUMMARY] Reading configuration from /Users/rchen/Desktop/test/testHvt/policy/regapp16.cfg [WARN] Registry is not configured [INFO] Processing directory: /Users/rchen/Desktop/test/testHvt/regapp16</p>

	<pre>[INFO] Processing /Users/rchen/Desktop/test/testHvt/regapp16/regapp16a.xml [INFO] Processing /Users/rchen/Desktop/test/testHvt/regapp16/regapp16b.xml [SUMMARY] Summary: [SUMMARY] Skipped files: 0 [SUMMARY] Processed files: 2 [SUMMARY] File counts by type: [SUMMARY] Product_Observational: 2 [SUMMARY] Package ID: e1972aec-2950-458b-b15b-d6197a4e5a71</pre>
Step 4:	<pre>Elasticsearch URL: http://localhost:9200 Index: registry Updating schema with fields from /tmp/harvest/out/fields.txt Updated 5 fields Loading file: /tmp/harvest/out/refdocs.json Loading file: /tmp/harvest/out/registry-docs.json Loaded 2 document(s)</pre>
Step 5:	<pre>Elasticsearch URL: http://localhost:9200 Index: registry New status: SAFED Package ID: e1972aec-2950-458b-b15b-d6197a4e5a71 Updated 2 document(s)</pre>
Step 6:	<pre>% Total % Received % Xferd Average Speed Time Time Time Current Dload Upload Total Spent Left Speed 100 3512 100 3512 0 0 685k 0 --:-- --:-- --:-- 685k "archive_status": "SAFED", "archive_status": "SAFED",</pre>
Step 7:	<pre>Elasticsearch URL: http://localhost:9200 Index: registry New status: ARCHIVED LIDVID: urn:nasa:pds:mars2020.medab:data_raw_env:we_c158_____eer_reset_____j::1.0 Updated 1 document(s)</pre>
Step 8:	<pre>% Total % Received % Xferd Average Speed Time Time Time Current Dload Upload Total Spent Left Speed 100 3515 100 3515 0 0 858k 0 --:-- --:-- --:-- 858k "archive_status": "SAFED", "archive_status": "ARCHIVED",</pre>
Comments	Results met success criteria.
Date of Testing	2021.05.19
Test Personnel	Richard Chen

Test Case ID	HVT.4
Description	Extract Metadata by Data Dictionary Class (pds-registry-app#6)
Requirements	same as in HVT.1
Success Criteria	
Test Steps	<ol style="list-style-type: none"> 1. cd /Users/rchen/Desktop/test/testHvt 2. Clean database as described in HVT.0 3. harvest -c policy/regapp6a.cfg #regAp#6 4. registry-manager load-data -dir /tmp/harvest/out 5. curl "http://localhost:9200/registry/_search?q=*" python -m json.tool > xa Painstakingly verify curl's output of "pds/<element>/pds/<leafElement>" against every leaf element in the harvested file, regapp6/bundle_supercam.xml. Or... <ol style="list-style-type: none"> 6. diff policy/regapp6[ab].cfg #regAp#7 7. grep _time xa #hvt#24 hvt#4

	8. Clean database as described in HVT.0 9. harvest -c policy/regapp6b.cfg #regAp#6 10. registry-manager load-data -dir /tmp/harvest/out 11. curl "http://localhost:9200/registry/_search?q=*" python -m json.tool > xb 12. diff xa xb; rm xa xb
Test Results	<p>Step 3: the .cfg file extracts all fields</p> <pre>[SUMMARY] Output directory: /tmp/harvest/out [SUMMARY] Output format: json [SUMMARY] Reading configuration from /Users/rchen/Desktop/test/testHvt/policy/regapp6a.cfg [WARN] Registry is not configured [INFO] Processing directory: /Users/rchen/Desktop/test/testHvt/regapp6 [INFO] Processing /Users/rchen/Desktop/test/testHvt/regapp6/bundle_supercam.xml [SUMMARY] Summary: [SUMMARY] Skipped files: 0 [SUMMARY] Processed files: 1 [SUMMARY] File counts by type: [SUMMARY] Product_Bundle: 1 [SUMMARY] Package ID: 0a3d855d-79fd-44c5-8265-b19a0c3d30c2</pre> <p>Step 4:</p> <pre>Elasticsearch URL: http://localhost:9200 Index: registry Updating schema with fields from /tmp/harvest/out/fields.txt Updated 42 fields Loading file: /tmp/harvest/out/refs-docs.json Loading file: /tmp/harvest/out/registry-docs.json Loaded 1 document(s)</pre> <p>Step 5: File xa, i.e. stdout</p> <pre>{ "took": 423, "timed_out": false, "_shards": { "total": 1, "successful": 1, "skipped": 0, "failed": 0 }, "hits": { "total": { "value": 1, "relation": "eq" }, "max_score": 1.0, "hits": [{ "_index": "registry", "_type": "_doc", "_id": "urn:nasa:pds:mars2020_supercam::1.0", "_score": 1.0, "_source": { "lid": "urn:nasa:pds:mars2020_supercam", "vid": "1.0", "lidvid": "urn:nasa:pds:mars2020_supercam::1.0", "title": "Mars 2020 SuperCam Bundle", "product_class": "Product_Bundle", "package_id": "e16c95cf-3ca4-4c7b-a1af-e01f3f9788ec", "ref_lid_document": ["urn:nasa:pds:mars2020_supercam:document:bundlesis", "urn:nasa:pds:mars2020_supercam:document:dpsis"], "ref_lid_instrument": "urn:nasa:pds:context:instrument:mars2020.supercam", "ref_lid_instrument_host": "urn:nasa:pds:context:instrument_host:spacecraft.mars2020", "ref_lid_investigation": "urn:nasa:pds:context:investigation:mission.mars2020", "ref_lid_target": "urn:nasa:pds:context:target:planet.mars", "pds/Bundle/pds/bundle_type": "Archive", "pds/Bundle/pds/description": "This bundle contains Mars 2020 SuperCam raw, calibrated, and derived data.", "pds/Bundle Member Entry/pds/lid_reference": [</pre>

```

    "urn:nasa:pds:mars2020_supercam:data_raw_soh",
    "urn:nasa:pds:mars2020_supercam:document"
],
"pds/Bundle_Member_Entry/pds/member_status": [
    "Primary",
    "Primary"
],
"pds/Bundle_Member_Entry/pds/reference_type": [
    "bundle_has_data_collection",
    "bundle_has_document_collection"
],
"pds/Citation_Information/pds/author_list": "Wiens, R.; Delapp, D.",
"pds/Citation_Information/pds/description": "Mars 2020 Perseverance Rover SuperCam Raw,
Calibrated, and Derived Data Products",
"pds/Citation_Information/pds/publication_year": "2021",
"pds/File/pds/file_name": "readme.txt",
"pds/Identification_Area/pds/information_model_version": "1.14.0.0",
"pds/Identification_Area/pds/logical_identifier": "urn:nasa:pds:mars2020_supercam",
"pds/Identification_Area/pds/product_class": "Product_Bundle",
"pds/Identification_Area/pds/title": "Mars 2020 SuperCam Bundle",
"pds/Identification_Area/pds/version_id": "1.0",
"pds/Internal_Reference/pds/comment": "Reference to the Planet - Mars target",
"pds/Internal_Reference/pds/lid_reference": [
    "urn:nasa:pds:context:investigation:mission.mars2020",
    "urn:nasa:pds:context:instrument_host:spacecraft.mars2020",
    "urn:nasa:pds:context:instrument:mars2020.supercam",
    "urn:nasa:pds:context:target:planet.mars",
    "urn:nasa:pds:mars2020_supercam:document:dpsis",
    "urn:nasa:pds:mars2020_supercam:document:bundlesis"
],
"pds/Internal_Reference/pds/reference_type": [
    "bundle_to_investigation",
    "is_instrument_host",
    "is_instrument",
    "document_to_target",
    "bundle_to_document",
    "bundle_to_document"
],
"pds/Investigation_Area/pds/name": "Mars 2020",
"pds/Investigation_Area/pds/type": "Mission",
"pds/Modification_Detail/pds/description": "Pre-peer review version",
"pds/Modification_Detail/pds/modification_date": "2020-09-23T00:00:00Z",
"pds/Modification_Detail/pds/version_id": "1.0",
"pds/Observing_System_Component/pds/name": [
    "Perseverance",
    "Spectrometer and Micro-Imager Suite (SuperCam)"
],
"pds/Observing_System_Component/pds/type": [
    "Host",
    "Instrument"
],
"pds/Primary_Result_Summary/pds/processing_level": [
    "Raw",
    "Calibrated",
    "Derived"
],
"pds/Primary_Result_Summary/pds/purpose": "Science",
"pds/Science_Facets/pds/discipline_name": "Geosciences",
"pds/Science_Facets/pds/domain": "Surface",
"pds/Science_Facets/pds/wavelength_range": [
    "Visible",
    "Near Infrared",
    "Far Infrared"
],
"pds/Stream_Text/pds/offset": "0",
"pds/Stream_Text/pds/parsing_standard_id": "7-Bit ASCII Text",
"pds/Stream_Text/pds/record_delimiter": "Carriage-Return Line-Feed",
"pds/Target_Identification/pds/name": "Mars",
"pds/Target_Identification/pds/type": "Planet",
"pds/Time_Coordinates/pds/start_date_time": "2020-07-31T11:50:00Z",

```

	<pre> "pds/Time_Coordinates/pds/stop_date_time": "3000-01-01T00:00:00.000Z" }] } } Step 6: 21c21,25 < <autogenFields/> --- > <autogenFields> > <classFilter> > <exclude>pds.Science_Facets</exclude> > </classFilter> > </autogenFields> </pre> <p>Step 7: hvt#4: the stored time was 12 hours off. hvt#24: format looks right</p> <pre> "pds/Time_Coordinates/pds/start_date_time": "2020-07-31T11:50:00Z", "pds/Time_Coordinates/pds/stop_date_time": "3000-01-01T00:00:00.000Z" </pre> <p>Step 12: The pds/Science_Facets/* lines from Step 5 are gone</p> <pre> 2c2 < "took": 1, --- > "took": 372, 28c28 < "_package_id": "0a3d855d-79fd-44c5-8265-b19a0c3d30c2", --- > "_package_id": "8b030b63-9c1f-46da-9818-b29e3e0bea52", 101,107d100 < "pds:Science_Facets/pds:discipline_name": "Geosciences", < "pds:Science_Facets/pds:domain": "Surface", < "pds:Science_Facets/pds:wavelength_range": [< "Visible", < "Near Infrared", < "Far Infrared" <], </pre>
Comments	Results met success criteria.
Date of Testing	2021.05.19
Test Personnel	Richard Chen

Test Case ID	HVT.5
Description	Handle multiple product versions (pds-registry-app#10)
Requirements	same as in HVT.1
Success Criteria	Registry should list all versions
Test Steps	<ol style="list-style-type: none"> 1. cd /Users/rchen/Desktop/test/testHvt 2. Clean database as described in HVT.0 3. harvest -c policy/regapp10.cfg #regAp#10 4. registry-manager load-data -dir /tmp/harvest/out 5. curl "http://localhost:9200/registry/_search?q=*" python -m json.tool > xa 6. cp regapp10/regapp10b.xml2 regapp10/regapp10b.xml 7. diff regapp10/*.xml 8. repeat Step 3 9. repeat Step 4 10. curl "http://localhost:9200/registry/_search?q=*" python -m json.tool > xb 11. diff xa xb 12. rm regapp10/regapp10b.xml xa xb
Test Results	<p>Step 3:</p> <p>[SUMMARY] Output directory: /tmp/harvest/out</p>

```
[SUMMARY] Output format: json
[SUMMARY] Reading configuration from /Users/rchen/Desktop/test/testHvt/policy/regapp10.cfg
[WARN] Registry is not configured
[INFO] Processing directory: /Users/rchen/Desktop/test/testHvt/regapp10
[INFO] Processing /Users/rchen/Desktop/test/testHvt/regapp10/regapp10a.xml
[SUMMARY] Summary:
[SUMMARY] Skipped files: 0
[SUMMARY] Processed files: 1
[SUMMARY] File counts by type:
[SUMMARY] Product_Ancillary: 1
[SUMMARY] Package ID: 5f9a77f1-1c81-436c-b46a-53d4c1ed4517
```

Step 4:

```
Elasticsearch URL: http://localhost:9200
Index: registry
Updating schema with fields from /tmp/harvest/out/fields.txt
Updated 36 fields
Loading data...
Loading file: /tmp/harvest/out/es-docs.json
Loaded 1 document(s)
Done
```

Step 7:

```
14c14
< <version_id>1.0</version_id>
---
> <version_id>1.1</version_id>
19a20,24
> <modification_date>2020-11-09</modification_date>
> <version_id>1.1</version_id>
> <description>NOTHING SUBSTANTIAL JUST TESTING</description>
> </Modification_Detail>
> </Modification_Detail>
```

Step 8:

```
[SUMMARY] Output directory: /tmp/harvest/out
[SUMMARY] Output format: json
[SUMMARY] Reading configuration from /Users/rchen/Desktop/test/testHvt/policy/regapp10.cfg
[WARN] Registry is not configured
[INFO] Processing directory: /Users/rchen/Desktop/test/testHvt/regapp10
[INFO] Processing /Users/rchen/Desktop/test/testHvt/regapp10/regapp10b.xml
[INFO] Processing /Users/rchen/Desktop/test/testHvt/regapp10/regapp10a.xml
[SUMMARY] Summary:
[SUMMARY] Skipped files: 0
[SUMMARY] Processed files: 2
[SUMMARY] File counts by type:
[SUMMARY] Product_Ancillary: 2
[SUMMARY] Package ID: da55e4e3-9a38-4823-bbac-7ea02fb8c58b
```

Step 9:

```
Elasticsearch URL: http://localhost:9200
Index: registry
Updating schema with fields from /tmp/harvest/out/fields.txt
Updated 0 fields
Loading file: /tmp/harvest/out/refs-docs.json
Loading file: /tmp/harvest/out/registry-docs.json
Loaded 2 document(s)
```

Step 11: note version 1.1

```
2c2
< "took": 1,
---
> "took": 158,
12c12
<     "value": 1,
---
>     "value": 2,
19a20,37
>         "_id": "urn:nasa:pds:orex.dsn:trk223_ionosphere:orex_beno_2019_244_2019_274_ion::1.1",
>         "_score": 1.0,
>         "_source": {
>             "lid": "urn:nasa:pds:orex.dsn:trk223_ionosphere:orex_beno_2019_244_2019_274_ion",
>             "vid": 1.100000023841858,
```

	<pre> > "lidvid": "urn:nasa:pds:orex.dsn:trk223_ionosphere:orex_beno_2019_244_2019_274_ion::1.1", > "title": "DSN Media Calibration (TRK 2-23) Ionospheric Calibration File", > "product_class": "Product_Ancillary", > "_package_id": "da55e4e3-9a38-4823-bbac-7ea02fb8c58b", > "ref_lid_instrument_host": "urn:nasa:pds:context:instrument_host:spacecraft.osiris-rex", > "ref_lid_investigation": "urn:nasa:pds:context:investigation:mission.orex::1.0", > "ref_lid_target": "urn:nasa:pds:context:target:asteroid.101955_bennu::1.0", > "ops:Harvest_Info/ops:node_name": "PDS_ATM" > } > }, > { > "_index": "registry", > "_type": "_doc", 28c46 < "_package_id": "5f9a77f1-1c81-436c-b46a-53d4c1ed4517", ---> "_package_id": "da55e4e3-9a38-4823-bbac-7ea02fb8c58b", </pre>
Comments	Results met success criteria.
Date of Testing	2021.05.19
Test Personnel	Richard Chen

Test Case ID	HVT.6
Description	Deploy Test vs Operations Registry environments (pds-registry-app#15)
Requirements	same as in HVT.1
Success Criteria	Normal registry absorbs data from a second registry
Test Steps	<ol style="list-style-type: none"> 1. cd /Users/rchen/Desktop/test/testHvt 2. Clean database as described in HVT.0 3. harvest -c policy/regapp10.cfg 4. registry-manager load-data -dir /tmp/harvest/out 5. curl "http://localhost:9200/registry/_search?q=*" python -m json.tool 6. mkdir /tmp/harvTmp 7. registry-manager create-registry -index test 8. harvest -c policy/regapp20.xml -o /tmp/harvTmp 9. registry-manager load-data -index test -dir /tmp/harvTmp 10. curl "http://localhost:9200/test/_search?q=*" python -m json.tool 11. registry-manager export-data -all -index test -file /tmp/harvDump.json 12. registry-manager load-data -dir /tmp/harvTmp -updateSchema n #regAp#69 regAp#15 13. curl "http://localhost:9200/registry/_search?q=*" python -m json.tool 14. registry-manager delete-registry -index test 15. rm -r /tmp/harvTmp
Test Results	<p>Step 3:</p> <pre> [SUMMARY] Output directory: /tmp/harvest/out [SUMMARY] Output format: json [SUMMARY] Reading configuration from /Users/rchen/Desktop/test/testHvt/policy/regapp10.cfg [WARN] Registry is not configured [INFO] Processing directory: /Users/rchen/Desktop/test/testHvt/regapp10 [INFO] Processing /Users/rchen/Desktop/test/testHvt/regapp10/regapp10a.xml [SUMMARY] Summary: [SUMMARY] Skipped files: 0 [SUMMARY] Processed files: 1 [SUMMARY] File counts by type: [SUMMARY] Product_Ancillary: 1 [SUMMARY] Package ID: a19d43f1-7466-4c8d-b5ac-43bbe7689d3b </pre> <p>Step 4:</p> <pre> Elasticsearch URL: http://localhost:9200 Index: registry Updating schema with fields from /tmp/harvest/out/fields.txt </pre>

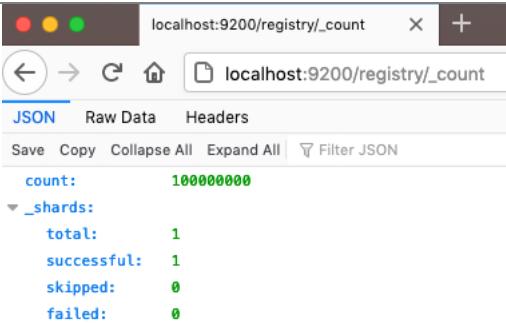
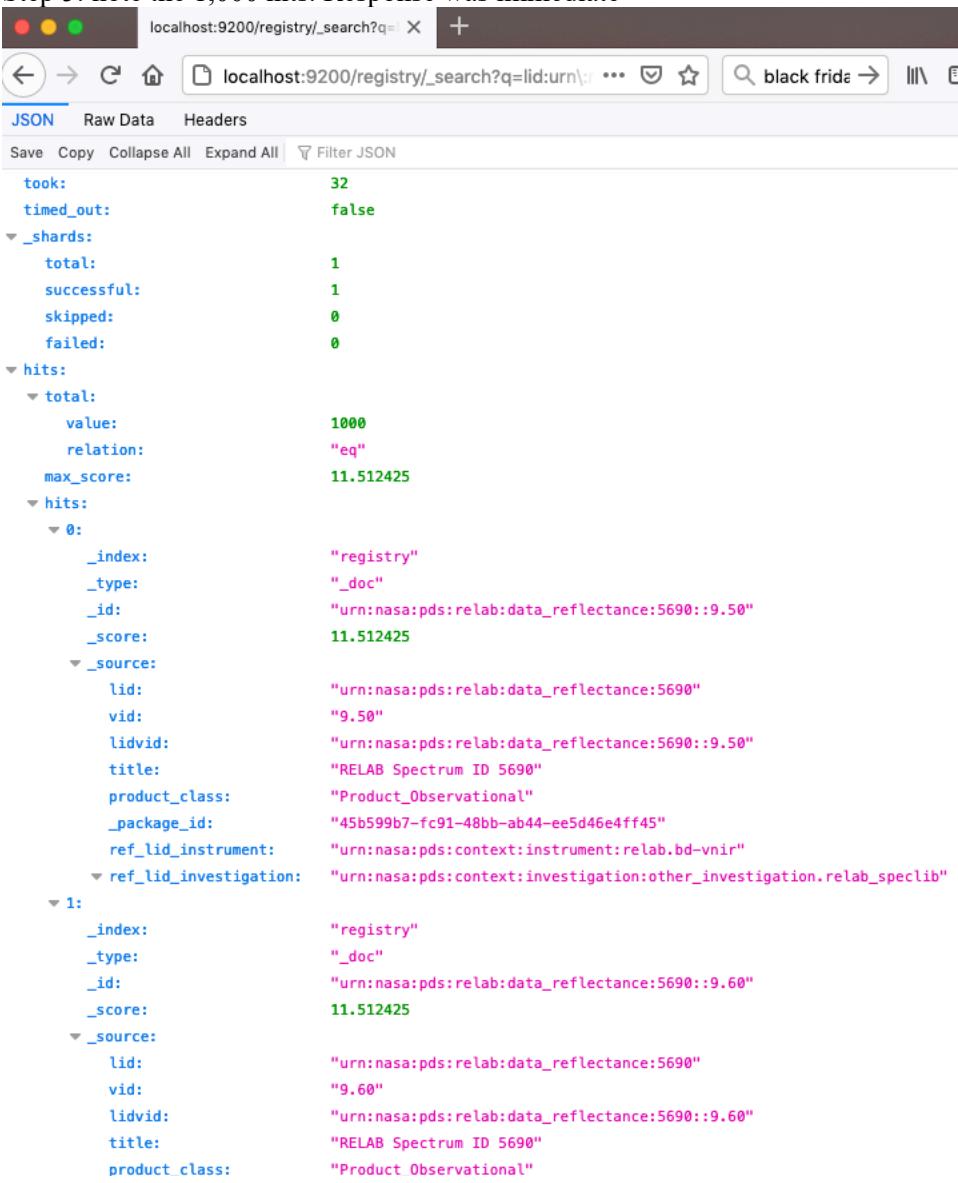
	<p>Updated 3 fields Loading file: /tmp/harvest/out/refs-docs.json Loading file: /tmp/harvest/out/registry-docs.json Loaded 1 document(s)</p>
Step 5:	<pre>% Total % Received % Xferd Average Speed Time Time Current Dload Upload Total Spent Left Speed 100 929 100 929 0 0 1184 0 --:--:--:--:--:-- 1186 { "took": 781, "timed_out": false, "_shards": { "total": 1, "successful": 1, "skipped": 0, "failed": 0 }, "hits": { "total": { "value": 1, "relation": "eq" }, "max_score": 1.0, "hits": [{ "_index": "registry", "_type": "_doc", "_id": "urn:nasa:pds:orex.dsn:trk223_ionosphere:orex_beno_2019_244_2019_274_ion::1.0", "_score": 1.0, "_source": { "lid": "urn:nasa:pds:orex.dsn:trk223_ionosphere:orex_beno_2019_244_2019_274_ion", "vid": 1.0, "lidvid": "urn:nasa:pds:orex.dsn:trk223_ionosphere:orex_beno_2019_244_2019_274_ion::1.0", "title": "DSN Media Calibration (TRK 2-23) Ionospheric Calibration File", "product_class": "Product_Ancillary", "package_id": "a19d43f1-7466-4c8d-b5ac-43bbe7689d3b", "ref_lid_instrument_host": "urn:nasa:pds:context:instrument_host:spacecraft.osiris-rex", "ref_lid_investigation": "urn:nasa:pds:context:investigation:mission.orex::1.0", "ref_lid_target": "urn:nasa:pds:context:target:asteroid.101955_bennu::1.0", "ops:Harvest_Info/ops:node_name": "PDS_ATM" } }] } }</pre>
Step 7:	<p>Elasticsearch URL: http://localhost:9200 Creating index... Index: test Schema: /Users/rchen/PDS4tools/registry-manager/elastic/registry.json Shards: 1 Replicas: 0 Done Creating index... Index: test-refs Schema: /Users/rchen/PDS4tools/registry-manager/elastic/refs.json Shards: 1 Replicas: 0 Done Creating index... Index: test-dd Schema: /Users/rchen/PDS4tools/registry-manager/elastic/data-dic.json Shards: 1 Replicas: 0 Done Loading file: /Users/rchen/PDS4tools/registry-manager/elastic/data-dic-data.jar:dd.json Loaded 2505 document(s)</p>
Step 8:	[SUMMARY] Output directory: /tmp/harvTmp

```
[SUMMARY] Output format: json
[SUMMARY] Reading configuration from /Users/rchen/Desktop/test/testHvt/policy/regapp20.xml
[WARN] Registry is not configured
[INFO] Processing directory: /Users/rchen/Desktop/test/testHvt/regapp20
[INFO] Processing /Users/rchen/Desktop/test/testHvt/regapp20/regapp20.xml
[SUMMARY] Summary:
[SUMMARY] Skipped files: 0
[SUMMARY] Processed files: 1
[SUMMARY] File counts by type:
[SUMMARY] Product_Observational: 1
[SUMMARY] Package ID: 1f36bfdb-3ef5-4921-ac11-806efbcd31c0

Step 9:
Elasticsearch URL: http://localhost:9200
Index: test
Updating schema with fields from /tmp/harvTmp/fields.txt
Updated 5 fields
Loading file: /tmp/harvTmp/refs-docs.json
Loading file: /tmp/harvTmp/registry-docs.json
Loaded 1 document(s)

Step 10:
% Total % Received % Xferd Average Speed Time Time Current
          Dload Upload Total Spent Left Speed
100 1826 100 1826 0 0 5016 0 --:--:--:--:--:-- 5016
{
  "took": 362,
  "timed_out": false,
  "_shards": {
    "total": 1,
    "successful": 1,
    "skipped": 0,
    "failed": 0
  },
  "hits": {
    "total": {
      "value": 1,
      "relation": "eq"
    },
    "max_score": 1.0,
    "hits": [
      {
        "_index": "test",
        "_type": "_doc",
        "_id": "urn:nasa:pds:mars2020_supercam:data_raw_spectra:ls_c293t0624868150_145er0__0010094scam15218_0001lujo1::1.0",
        "_score": 1.0,
        "_source": {
          "_lid": "urn:nasa:pds:mars2020_supercam:data_raw_spectra:ls_c293t0624868150_145er0__0010094scam15218_0001lujo1",
          "vid": 1.0,
          "lidvid": "urn:nasa:pds:mars2020_supercam:data_raw_spectra:ls_c293t0624868150_145er0__0010094scam15218_0001lujo1::1.0",
          "title": "Mars 2020 SuperCam Raw Raman Spectra",
          "product_class": "Product_Observational",
          "package_id": "1f36bfdb-3ef5-4921-ac11-806efbcd31c0",
          "ref_lid_document": "urn:nasa:pds:mars2020.supercam:document:bundle_sis",
          "ref_lid_instrument": "urn:nasa:pds:context:instrument:mars2020.supercam",
          "ref_lid_instrument_host": "urn:nasa:pds:context:instrument_host:spacecraft.mars2020",
          "ref_lid_investigation": "urn:nasa:pds:context:investigation:mission.mars2020",
          "ref_lid_target": "urn:nasa:pds:context:target:planet.mars",
          "ops:Data_File_Info/ops:creation_date_time": "2020-11-02T08:56:57Z",
          "ops:Data_File_Info/ops:file_name": "regapp20.FITS",
          "ops:Data_File_Info/ops:file_ref": "/Users/rchen/Desktop/test/testHvt/regapp20/regapp20.FITS",
          "ops:Data_File_Info/ops:file_size": "146",
          "ops:Data_File_Info/ops:md5_checksum": "b0f73f06f8e6f3963979bf9ae5436b27",
          "ops:Data_File_Info/ops:mime_type": "text/plain",
          "ops:Harvest_Info/ops:node_name": "PDS_ATM",
        }
      }
    ]
  }
}
```


	<pre> "title": "Mars 2020 SuperCam Raw Raman Spectra", "product_class": "Product_Observational", "_package_id": "1f36bfdb-3ef5-4921-ac11-806efbcd31c0", "ref_lid_document": "urn:nasa:pds:mars2020.supercam:document:bundle_sis", "ref_lid_instrument": "urn:nasa:pds:context:instrument:mars2020.supercam", "ref_lid_instrument_host": "urn:nasa:pds:context:instrument_host:spacecraft.mars2020", "ref_lid_investigation": "urn:nasa:pds:context:investigation:mission.mars2020", "ref_lid_target": "urn:nasa:pds:context:target:planet.mars", "ops:Data_File_Info/ops:creation_date_time": "2020-11-02T08:56:57Z", "ops:Data_File_Info/ops:file_name": "regapp20.FITS", "ops:Data_File_Info/ops:file_ref": "/Users/rchen/Desktop/test/testHvt/regapp20/regapp20.FITS", "ops:Data_File_Info/ops:file_size": "146", "ops:Data_File_Info/ops:md5_checksum": "b0f73f06f8e6f3963979bf9ae5436b27", "ops:Data_File_Info/ops:mime_type": "text/plain", "ops:Harvest_Info/ops:node_name": "PDS_ATM", "ops:Label_File_Info/ops:creation_date_time": "2020-11-03T01:02:08Z", "ops:Label_File_Info/ops:file_name": "regapp20.xml", "ops:Label_File_Info/ops:file_ref": "/Users/rchen/Desktop/test/testHvt/regapp20/regapp20.xml", "ops:Label_File_Info/ops:file_size": "4375", "ops:Label_File_Info/ops:md5_checksum": "62e469c311d2fa9fa25d247b6522d526" }] } } } Step 13: Elasticsearch URL: http://localhost:9200 Deleting index test Deleting index test-dd Done </pre>
Comments	Results met success criteria.
Date of Testing	2021.05.19
Test Personnel	Richard Chen
Test Case ID	HVT.7
Description	Publish and manage up to 100 million registrations (pds-registry-app#54)
Requirements	PASS pds-registry-app#54: The service should be scalable to enable publishing and management of up to 100 million registrations
Success Criteria	Harvest 100,000,000 labels. Retrieve individual products
Test Steps	<ol style="list-style-type: none"> 1. Clean database as described in HVT.0 2. cd /Users/rchen/Desktop/test/testHvt/regapp54 #regAp#54 <p>OK, the following code is weird because I wanted 1 program to generate 1,000,000 labels with different LIDs (though pointing to the same data file) then change the vid and repeat 100 times. However, my computer started crawling somewhere after 100,000 labels, and even stopping the process and deleting the labels was iffy and took forever. So each runmeX generates 100,000 labels, harvests, register/loads, deletes them, then changes the vid a little and repeats 100 times. The various runme each forms slightly different vids. The runmeX also calls and outputs date 3 times per 100,00, which provided the info to determine amount of time to run each part</p> <ol style="list-style-type: none"> 3. runme0; runme1; runme2; runme3; runme4; runme5; runme6; runme7; runme8; runme9 4. http://localhost:9200/registry/_count <p>:5690">http://localhost:9200/registry/_search?q=lid:urn:nasa:pds:relab:data_reflectance\>:5690</p>
Test Results	<p>Step 3: a ton of output</p> <p>Step 4: note the count is 100,000,000</p>

	 <pre> count: 10000000 { "_shards": { "total": 1, "successful": 1, "skipped": 0, "failed": 0 } } </pre> <p>Step 5: note the 1,000 hits. Response was immediate</p>  <pre> took: 32 { "_shards": { "total": 1, "successful": 1, "skipped": 0, "failed": 0 }, "hits": [{ "total": { "value": 1000, "relation": "eq", "max_score": 11.512425 }, "hits": [{ "0": { "_index": "registry", "_type": "_doc", "_id": "urn:nasa:pds:relab:data_reflectance:5690::9.50", "_score": 11.512425, "_source": { "lid": "urn:nasa:pds:relab:data_reflectance:5690", "vid": "9.50", "lidvid": "urn:nasa:pds:relab:data_reflectance:5690::9.50", "title": "RELAB Spectrum ID 5690", "product_class": "Product_Observational", "package_id": "45b599b7-fc91-48bb-ab44-ee5d46e4ff45", "ref_lid_instrument": "urn:nasa:pds:context:instrument:relab.bd-vnir", "ref_lid_investigation": "urn:nasa:pds:context:investigation:other_investigation.relab_speclib" } }, "1": { "_index": "registry", "_type": "_doc", "_id": "urn:nasa:pds:relab:data_reflectance:5690::9.60", "_score": 11.512425, "_source": { "lid": "urn:nasa:pds:relab:data_reflectance:5690", "vid": "9.60", "lidvid": "urn:nasa:pds:relab:data_reflectance:5690::9.60", "title": "RELAB Spectrum ID 5690", "product_class": "Product_Observational" } }] } }] } </pre>
Comments	Results met success criteria. Total time: 44 hours, of which harvest took 24.55 hours, registry-manager load-data took 9.13 hours, and the file generation and deletion took 10.16 hours. The time to register didn't vary much, from 52.38 minutes for the first 10,000,000 to 55.30 minutes for the last 10,000,000

Date of Testing	2021.05.19
Test Personnel	Richard Chen

Test Case ID	HVT.8
Description	Require LID and VID for artifacts (pds-registry-app#73). Validate metadata (pds-registry-app#74).
Requirements	PASS pds-registry-app#73: The service shall require a logical identifier and version be provided ... PASS pds-registry-app#74: The service shall validate metadata for a registered artifact
Success Criteria	Harvest or registry flags metadata missing such things
Test Steps	<ol style="list-style-type: none"> 1. cd /Users/rchen/Desktop/test/testHvt 2. grep logical_identifier regapp73/regapp73.xml 3. harvest -c policy/regapp73.xml #regAp#73, #74
Test Results	<p>Step 2: Note that logical_identifier is missing</p> <pre><!-- logical_identifier>urn:nasa:pds:mars2020_supercam:data_raw_spectra:ls_c293t0624868150_145er0_0010094sca m15218_0001luj01</logical_identifier--></pre> <p>Step 3:</p> <pre>[INFO] Output directory: /tmp/harvest/out [INFO] Output format: json [INFO] Reading configuration from testHvt/regapp73/regapp73.cfg [INFO] Processing file /Users/rchen/Desktop/test/testHvt/regapp73/regapp73.xml [ERROR] Missing logical identifier: /Users/rchen/Desktop/test/testHvt/regapp73/regapp73.xml</pre>
Comments	Results met success criteria.
Date of Testing	2021.05.19
Test Personnel	Richard Chen

Test Case ID	HVT.9
Description	Update (pds-registry-app#71) and delete (#70) registered artifacts
Requirements	PASS pds-registry-app#70: The service shall allow deletion of registered artifacts PASS pds-registry-app#71: The service shall allow updates to registered artifacts
Success Criteria	Replace 1 registration with another with the same lidvid. Delete a registration
Test Steps	<ol style="list-style-type: none"> 1. cd /Users/rchen/Desktop/test/testHvt 2. Clean database as described in HVT.0 3. harvest -c policy/regapp70.xml 4. registry-manager load-data -dir /tmp/harvest/out 5. curl "http://localhost:9200/registry/_search?q=*" python -m json.tool > xa 6. diff regapp70/regapp70.xml regapp70/regapp70.x2 7. mv regapp70/regapp70.xml regapp70/regapp70.x1 8. mv regapp70/regapp70.x2 regapp70/regapp70.xml 9. repeat Step 3 #regAp#71 10. repeat Step 4 11. curl "http://localhost:9200/registry/_search?q=*" python -m json.tool > xb 12. diff xa xb; rm xa xb 13. mv regapp70/regapp70.xml regapp70/regapp70.x2 14. mv regapp70/regapp70.x1 regapp70/regapp70.xml 15. registry-manager delete-data -lid urn:nasa:pds:orex.dsn:trk223_ionosphere:orex_beno_2019_244_2019_274_ion #regAp#70

	16. curl "http://localhost:9200/registry/_search?q=*" python -m json.tool
Test Results	<p>Step 3:</p> <pre>[SUMMARY] Output directory: /tmp/harvest/out [SUMMARY] Output format: json [SUMMARY] Reading configuration from /Users/rchen/Desktop/test/testHvt/policy/regapp70.xml [WARN] Registry is not configured [INFO] Processing directory: /Users/rchen/Desktop/test/testHvt/regapp70 [INFO] Processing /Users/rchen/Desktop/test/testHvt/regapp70/regapp70.xml [SUMMARY] Summary: [SUMMARY] Skipped files: 0 [SUMMARY] Processed files: 1 [SUMMARY] File counts by type: [SUMMARY] Product_Ancillary: 1 [SUMMARY] Package ID: 02b333c-074c-4f4e-8b30-2d61aa59a4d9</pre> <p>Step 4:</p> <pre>Elasticsearch URL: http://localhost:9200 Index: registry Updating schema with fields from /tmp/harvest/out/fields.txt Updated 3 fields Loading file: /tmp/harvest/out/refs-docs.json Loading file: /tmp/harvest/out/registry-docs.json Loaded 1 document(s)</pre> <p>Step 6:</p> <pre>15c15 < <title>DSN Media Calibration (TRK 2-23) Ionospheric Calibration File</title> --- > <title>***FAKE VALUE - JUST SHOWING UPDATES***</title></pre> <p>Step 8: same output as Step 5 except for _package_id value.</p> <p>Step 9: same as Step 3 except for the Package ID</p> <pre>[SUMMARY] Output directory: /tmp/harvest/out [SUMMARY] Output format: json [SUMMARY] Reading configuration from /Users/rchen/Desktop/test/testHvt/policy/regapp70.xml [WARN] Registry is not configured [INFO] Processing directory: /Users/rchen/Desktop/test/testHvt/regapp70 [INFO] Processing /Users/rchen/Desktop/test/testHvt/regapp70/regapp70.xml [SUMMARY] Summary: [SUMMARY] Skipped files: 0 [SUMMARY] Processed files: 1 [SUMMARY] File counts by type: [SUMMARY] Product_Ancillary: 1 [SUMMARY] Package ID: 07bc7aac-02bd-4850-957d-ebd325645d3e</pre> <p>Step 10:</p> <pre>Elasticsearch URL: http://localhost:9200 Index: registry Updating schema with fields from /tmp/harvest/out/fields.txt Updated 0 fields Loading file: /tmp/harvest/out/refs-docs.json Loading file: /tmp/harvest/out/registry-docs.json Loaded 1 document(s)</pre> <p>Step 12:</p> <pre>2c2 < "took": 866, --- > "took": 398, 26c26 < "title": "DSN Media Calibration (TRK 2-23) Ionospheric Calibration File", --- > "title": "***FAKE VALUE - JUST SHOWING UPDATES***", 28c28 < "_package_id": "02b333c-074c-4f4e-8b30-2d61aa59a4d9", --- > "_package_id": "07bc7aac-02bd-4850-957d-ebd325645d3e",</pre> <p>Step 15:</p> <pre>Elasticsearch URL: http://localhost:9200 Index: registry LID: urn:nasa:pds:orex.dsn:trk223 ionosphere:orex_beno 2019_244 2019_274 ion</pre>

	<p>Deleted 1 document(s) from registry index Deleted 0 document(s) from registry-refs index</p> <p>Step 16: nothing left in database</p> <pre>% Total % Received % Xferd Average Speed Time Time Time Current Dload Upload Total Spent Left Speed 100 160 100 160 0 0 40000 0 --:-- --:-- --:-- 53333 { "took": 1, "timed_out": false, "_shards": { "total": 1, "successful": 1, "skipped": 0, "failed": 0 }, "hits": { "total": { "value": 0, "relation": "eq" }, "max_score": null, "hits": [] } }</pre>
Comments	Results met success criteria.
Date of Testing	2021.05.19
Test Personnel	Richard Chen

Test Case ID	HVT.10
Description	Register file system metadata (pds-registry-app#67)
Requirements	PASS pds-registry-app#67 The service shall require a subset of file system metadata ...
Success Criteria	The captured metadata includes path, checksum, LID, VID, size, timestamp, and mime type of product
Test Steps	<ol style="list-style-type: none"> 1. Clean database as described in HVT.0 2. cd /Users/rchen/Desktop/test/testHvt 3. harvest -c policy/regapp67.xml #regAp#67 4. registry-manager load-data -dir /tmp/harvest/out 5. curl "http://localhost:9200/registry/_search?q=*" python -m json.tool
Test Results	<p>Step 3:</p> <pre>[SUMMARY] Output directory: /tmp/harvest/out [SUMMARY] Output format: json [SUMMARY] Reading configuration from /Users/rchen/Desktop/test/testHvt/policy/regapp67.xml [WARN] Registry is not configured [INFO] Processing directory: /Users/rchen/Desktop/test/testHvt/regapp67 [INFO] Processing /Users/rchen/Desktop/test/testHvt/regapp67/regapp67.xml [SUMMARY] Summary: [SUMMARY] Skipped files: 0 [SUMMARY] Processed files: 1 [SUMMARY] File counts by type: [SUMMARY] Product_Ancillary: 1 [SUMMARY] Package ID: 89fb3dbe-4a2e-4c80-99ce-a14a4c8ff284</pre> <p>Step 4:</p> <pre>Elasticsearch URL: http://localhost:9200 Index: registry Updating schema with fields from /tmp/harvest/out/fields.txt Updated 7 fields Loading file: /tmp/harvest/out/ref-docs.json Loading file: /tmp/harvest/out/registry-docs.json Loaded 1 document(s)</pre> <p>Step 5: all fields requested in regAp#67 show up in the registry</p>

	<pre>% Total % Received % Xferd Average Speed Time Time Time Current Dload Upload Total Spent Left Speed 100 1923 100 1923 0 0 2827 0 --:-- --:-- --:-- 2823 { "took": 678, "timed_out": false, "_shards": { "total": 1, "successful": 1, "skipped": 0, "failed": 0 }, "hits": { "total": { "value": 1, "relation": "eq" }, "max_score": 1.0, "hits": [{ "_index": "registry", "_type": "_doc", "_id": "urn:nasa:pds:orex.dsn:trk223_ionosphere:orex_beno_2019_244_2019_274_ion::1.0", "_score": 1.0, "_source": { "lid": "urn:nasa:pds:orex.dsn:trk223_ionosphere:orex_beno_2019_244_2019_274_ion", "vid": 1.0, "lidvid": "urn:nasa:pds:orex.dsn:trk223_ionosphere:orex_beno_2019_244_2019_274_ion::1.0", "title": "DSN Media Calibration (TRK 2-23) Ionospheric Calibration File", "product_class": "Product_Ancillary", "package_id": "89fb3dbe-4a2e-4c80-99ce-a14a4c8ff284", "ref_lid_facility": "urn:nasa:pds:context:facility:observatory.dsn", "ref_lid_instrument": "urn:nasa:pds:context:instrument:arecibo.305m.trans_s", "ref_lid_instrument_host": "urn:nasa:pds:context:instrument_host:spacecraft.osiris-rex", "ref_lid_investigation": "urn:nasa:pds:context:investigation:mission.orex", "ref_lid_target": "urn:nasa:pds:context:target:asteroid.101955 Bennu", "ref_livid_investigation": "urn:nasa:pds:context:investigation:mission.orex::1.0", "ref_livid_target": "urn:nasa:pds:context:target:asteroid.101955 Bennu::1.0", "ops:Data_File_Info/ops:creation_date_time": "2020-03-05T18:52:56Z", "ops:Data_File_Info/ops:file_name": "regapp67.csp", "ops:Data_File_Info/ops:file_ref": "/Users/rchen/Desktop/test/testHvt/regapp67/regapp67.csp", "ops:Data_File_Info/ops:file_size": "33589", "ops:Data_File_Info/ops:md5_checksum": "a534b4a1297d783b21a4cec5cb6a77f6", "ops:Data_File_Info/ops:mime_type": "text/plain", "ops:Harvest_Info/ops:node_name": "PDS_ATM", "ops:Label_File_Info/ops:creation_date_time": "2020-03-05T18:52:56Z", "ops:Label_File_Info/ops:file_name": "regapp67.xml", "ops:Label_File_Info/ops:file_ref": "/Users/rchen/Desktop/test/testHvt/regapp67/regapp67.xml", "ops:Label_File_Info/ops:file_size": "5640", "ops:Label_File_Info/ops:md5_checksum": "1ef55feead05f4953af960e9bb9b3723" } }] } } </pre>
Comments	Results met success criteria.
Date of Testing	2021.05.19
Test Personnel	Richard Chen

Test Case ID	HVT.11
Description	Parse date of yyyy-mm-ddZ (hvt#29) Store all values, including duplicates, of multivalued fields (hvt#30)
Requirements	PASS harvest#29 Could not parse date in yyyy-MM-ddZ format PASS harvest#30 For multivalued fields only unique values are stored

Success Criteria	All values, including duplicates, get stored. Date with no time gets stored.
Test Steps	<ol style="list-style-type: none"> 1. Clean database as described in HVT.0 2. cd /Users/rchen/Desktop/test/testHvt 3. harvest -c policy/hvt30.xml #hvt#29,hvt#30 4. registry-manager load-data -dir /tmp/harvest/out 5. grep -A3 modification_date hvt30/collection_data-1.0.xml 6. curl "http://localhost:9200/registry/_search?q=*" python -m json.tool grep -A4 Modification Detail
Test Results	<p>Step 3:</p> <pre>[SUMMARY] Output directory: /tmp/harvest/out [SUMMARY] Output format: json [SUMMARY] Reading configuration from /Users/rchen/Desktop/test/testHvt/policy/hvt30.xml [WARN] Registry is not configured [INFO] Processing directory: /Users/rchen/Desktop/test/testHvt/hvt30 [INFO] Processing /Users/rchen/Desktop/test/testHvt/hvt30/collection_data-1.0.xml [SUMMARY] Summary: [SUMMARY] Skipped files: 0 [SUMMARY] Processed files: 1 [SUMMARY] File counts by type: [SUMMARY] Product_Collection: 1 [SUMMARY] Package ID: ba68ba3a-e60c-4957-8903-c456233c9893</pre> <p>Step 4:</p> <pre>Elasticsearch URL: http://localhost:9200 Index: registry Updating schema with fields from /tmp/harvest/out/fields.txt Updated 57 fields Loading file: /tmp/harvest/out/refs-docs.json Loaded 1 document(s) Loading file: /tmp/harvest/out/registry-docs.json Loaded 1 document(s)</pre> <p>Step 5:</p> <pre><modification_date>2020-11-16</modification_date> <version_id>1.1</version_id> <description>do all show up correctly</description> </Modification_Detail> --> <modification_date>2020-11-16</modification_date> <!-- hvt#30 --> <version_id>1.0</version_id> <description>RC: do duplicates reach search index? hvt#30</description> </Modification_Detail> --> <modification_date>2020-11-16</modification_date> <version_id>1.0</version_id> <description>Initial Version</description> </Modification_Detail></pre> <p>Step 6: Date stored correctly. Duplicates stored correctly.</p> <pre>% Total % Received % Xferd Average Speed Time Time Time Current Dload Upload Total Spent Left Speed 100 5597 100 5597 0 0 133k 0 --:-- --:-- --:-- 133k "pds/Modification_Detail/pds/description": ["do all show up correctly", "RC: do duplicates reach search index? hvt#30", "Initial Version"], --> "pds/Modification_Detail/pds/modification_date": ["2020-11-16T00:00:00Z", "2020-11-16T00:00:00Z", "2020-11-16T00:00:00Z"], --> "pds/Modification_Detail/pds/version_id": ["1.1", "1.0", "1.0"</pre>

],
Comments	Results met success criteria.
Date of Testing	2021.05.19
Test Personnel	Richard Chen

Test Case ID	HVT.12
Description	Test various capabilities described in release 11.1. hvt#41 hvt#37 hvt#45 regAp#103 regAp#130 regAp#142 regAp#143 regAp#144 regAp#145 regAp#147
Requirements	PASS
Success Criteria	various
Test Steps	<ol style="list-style-type: none"> 1. Clean database as described in HVT.0 2. cd /Users/rchen/Desktop/test 3. diff hvt41a/dataset.xml hvt41b/dataset.xml 4. harvest -c policy/hvt41a.xml #hvt#41 & hvt#45 5. registry-manager load-data -dir /tmp/harvest/out #else won't get in registry 6. harvest -c policy/hvt41b.xml #hvt#41 7. registry-manager load-data -dir /tmp/harvest/out 8. http://localhost:9200/registry/_search?q=* 9. ls -l \$HARVEST_HOME/conf/examples/ #hvt#37 10. clean database as described in HVT.0 11. harvest -c policy/regapp130c.xml 12. wc /tmp/harvest/out/re* head -2 13. harvest -c policy/regapp130b.xml # nothing was loaded so no need to clean db 14. registry-manager load-data -dir /tmp/harvest/out 15. harvest -c policy/regapp130c.xml 16. wc /tmp/harvest/out/re* head -2 #end of regAp#130 regAp#131 17. harvest -c policy/regapp142.xml #regAp#142 18. registry-manager load-data -dir /tmp/harvest/out 19. harvest -c policy/regapp147a.xml #regAp#147 20. harvest -c policy/regapp147b.xml #regAp#147 21. clean database as described in HVT.0 22. harvest -c policy/regapp145.xml #regAp#145 23. registry-manager load-data -dir /tmp/harvest/out 24. curl "http://localhost:9200/registry/_search?q=*&pretty" & grep -A3 file_size 25. ls -l regapp145 grep EUV 26. clean database as described in HVT.0 27. harvest -c policy/regapp144.xml #regAp#144 28. registry-manager load-data -dir /tmp/harvest/out 29. grep "<member_status>Secondary" -B2 regapp144/bundle_insight_seis.xml 30. curl "http://localhost:9200/registry/_search?q=*&pretty" & grep ref_lid_collection_secondary 31. clean database as described in HVT.0 32. harvest -c policy/regapp143.xml #regAp#143 33. registry-manager load-data -dir /tmp/harvest/out 34. cat regapp143/xml schema/collection xml schema.csv

	35. curl "http://localhost:9200/registry-refs/_search?q=reference_type:secondary&pretty" & grep urn:nasa:pds:system_bundle:xml_schema 36. clean database as described in HVT.0 37. harvest -c policy/regapp103.xml #regAp#103 38. registry-manager load-data -dir /tmp/harvest/out 39. If "[ERROR] Could not find datatype for field 'orex:...'", registry-manager load-dd -dd regapp103/orex_ldd_OREX_1300.JSON then repeat load-data 40. http://localhost:9200/registry/_search?q=* 41.
Test Results	<p>Step 3:</p> <pre> 9c9 < <logical_identifier>urn:nasa:pds:vg1-sat-crs-d1-d2-192sec:document:dataset</logical_identifier> --- > <logical_identifier>urn:nasa:pds:vg1-sat-crs-d1-d2-192sec:document:harvestx</logical_identifier> 85c85 < <directory_path_name>../hvt41x</directory_path_name> --- > <!--directory_path_name>../hvt41x</directory_path_name--> <!-- only a correct, relative path works --> </pre> <p>Step 4:</p> <pre> [SUMMARY] Output directory: /tmp/harvest/out [SUMMARY] Output format: json [SUMMARY] Reading configuration from /Users/rchen/Desktop/test/testHvt/policy/hvt41a.xml [WARN] Registry is not configured [INFO] Processing directory: /Users/rchen/Desktop/test/testHvt/hvt41a [INFO] Processing /Users/rchen/Desktop/test/testHvt/hvt41a/dataset.xml [SUMMARY] Summary: [SUMMARY] Skipped files: 0 [SUMMARY] Processed files: 1 [SUMMARY] File counts by type: [SUMMARY] Product_Document: 1 [SUMMARY] Package ID: 85cb651a-7dab-4a26-b089-840994cbc9bf </pre> <p>Step 5:</p> <pre> /Users/rchen/Desktop/test/testHvt> registry-manager load-data -dir /tmp/harvest/out URL: http://localhost:9200 Index: registry Updating schema with fields from /tmp/harvest/out/fields.txt Updated 35 fields Loading file: /tmp/harvest/out/refs-docs.json Loading file: /tmp/harvest/out/registry-docs.json Loaded 1 document(s) </pre> <p>Elasticsearch</p> <p>Step 6:</p> <pre> [SUMMARY] Output directory: /tmp/harvest/out [SUMMARY] Output format: json [SUMMARY] Reading configuration from /Users/rchen/Desktop/test/testHvt/policy/hvt41b.xml [WARN] Registry is not configured [INFO] Processing directory: /Users/rchen/Desktop/test/testHvt/hvt41b [INFO] Processing /Users/rchen/Desktop/test/testHvt/hvt41b/dataset.xml [ERROR] Data file /Users/rchen/Desktop/test/testHvt/hvt41b/dataset.txt doesn't exist </pre> <p>Step 7:</p> <pre> Elasticsearch URL: http://localhost:9200 Index: registry Updating schema with fields from /tmp/harvest/out/fields.txt Updated 0 fields Loading file: /tmp/harvest/out/refs-docs.json Loading file: /tmp/harvest/out/registry-docs.json </pre> <p>Step 8:</p>

```

localhost:9200/registry/_search?q=*
took: 1
timed_out: false
{
  _shards: {
    total: 1
  }
  hits: [
    {
      total: 1
      hits: [
        {
          _index: "registry"
          _type: "_doc"
          _id: "urn:nasa:fps:vg1-sat-crss-d1-d2-192sec:document:dataset::1.0"
          _score: 1
          _source: {
            lid: "urn:nasa:fps:vg1-sat-crss-d1-d2-192sec:document:dataset"
            vid: 1
            lidvid: "urn:nasa:fps:vg1-sat-crss-d1-d2-192sec:document:dataset::1.0"
            title: "Voyager 1 Saturn CRS Averaged D1/D2 192 Second Counting Rate Dataset"
            product_class: "Product_Document"
            _package_id: "ddb4f87-c96c-472e-a37c-8cd481fb67cd"
            ref_lid_instrument: "urn:nasa:fps:context:instrument:crs.vg1"
            ref_lid_instrument_host: "urn:nasa:fps:context:instrument_host:spacecraft.vg1"
            ref_lid_investigation: "urn:nasa:fps:context:investigation:mission.voyager"
            ref_lid_target: [
              {
                id: 0
                target: "urn:nasa:fps:context:target:planet.saturn"
              },
              {
                id: 1
                target: "urn:nasa:fps:context:target:satellite.saturn.titan"
              }
            ]
            ops: {
              Data_File_Info: {
                creation_date_time: "2021-04-02T18:11:59Z"
                file_name: "dataset.txt"
                file_ref: "/Users/rchen/Desktop/test/testHvt/hvt41a/..//hvt41x/dataset.txt"
                file_size: "5280"
              }
            }
          }
        }
      ]
    }
  ]
}

```

Step 9: bundles.xml and directories.xml are configuration files.

```

total 24
-rw-rw-r--@ 1 rchen 703763885 2477 Apr 23 07:38 bundles.xml
-rw-rw-r--@ 1 rchen 703763885 1589 Apr 23 07:38 directories.xml
drwxr-xr-x@ 3 rchen 703763885 96 May 24 00:33 fields/
-rw-rw-r--@ 1 rchen 703763885 941 Apr 23 07:38 xpaths.xml

```

Step 11:

```

[SUMMARY] Output directory: /tmp/harvest/out
[SUMMARY] Output format: json
[SUMMARY] Reading configuration from /Users/rchen/Desktop/test/testHvt/policy/regapp130c.xml
[INFO] Processing bundle directory /Users/rchen/Desktop/test/testHvt/regapp130c
[INFO] Processing bundle /Users/rchen/Desktop/test/testHvt/regapp130c/bundle_cassini_saturn_radar_maps.xml
[INFO] Processing collection
/Users/rchen/Desktop/test/testHvt/regapp130c/context/collection_context_cassini_saturn_radar_maps.xml
[INFO] Processing collection
/Users/rchen/Desktop/test/testHvt/regapp130c/data_derived/collection_data_cassini_saturn_radar_maps.xml
[INFO] Processing collection
/Users/rchen/Desktop/test/testHvt/regapp130c/document/collection_document_cassini_saturn_radar_maps.xml
[INFO] Processing collection
/Users/rchen/Desktop/test/testHvt/regapp130c/xml_schema/collection_schema_cassini_saturn_radar_maps.xml
[INFO] Processing products...
[INFO] Processing product /Users/rchen/Desktop/test/testHvt/regapp130c/data_derived/xtra.xml
[INFO] Processing product /Users/rchen/Desktop/test/testHvt/regapp130c/data_derived/Saturn_015.xml
[INFO] Processing product /Users/rchen/Desktop/test/testHvt/regapp130c/data_derived/Saturn_015_pg.xml
[INFO] Processing product
/Users/rchen/Desktop/test/testHvt/regapp130c/document/document_cassini_saturn_radar_maps.xml
[SUMMARY] Summary:
[SUMMARY] Skipped files: 0
[SUMMARY] Processed files: 9
[SUMMARY] File counts by type:
[SUMMARY] Product_Bundle: 1
[SUMMARY] Product_Collection: 4
[SUMMARY] Product_Document: 1
[SUMMARY] Product_Observational: 3
[SUMMARY] Package ID: 05dc2086-6d33-4564-85e3-2aa7c4f56c80

```

Step 12:

	<pre>10 10 3027 /tmp/harvest/out/refs-docs.json 18 109 7053 /tmp/harvest/out/registry-docs.json</pre>
Step 13:	<pre>[SUMMARY] Output directory: /tmp/harvest/out [SUMMARY] Output format: json [SUMMARY] Reading configuration from /Users/rchen/Desktop/test/testHvt/policy/regapp130b.xml [INFO] Processing bundle directory /Users/rchen/Desktop/test/testHvt/regapp130b [INFO] Processing bundle /Users/rchen/Desktop/test/testHvt/regapp130b/bundle_cassini_saturn_radar_maps.xml [INFO] Processing collection /Users/rchen/Desktop/test/testHvt/regapp130b/context/collection_context_cassini_saturn_radar_maps.xml [INFO] Processing collection /Users/rchen/Desktop/test/testHvt/regapp130b/document/collection_document_cassini_saturn_radar_maps.xml [INFO] Processing products... [INFO] Processing product</pre>
Step 14:	<pre>[SUMMARY] Summary: [SUMMARY] Skipped files: 2 [SUMMARY] Processed files: 4 [SUMMARY] File counts by type: [SUMMARY] Product_Bundle: 1 [SUMMARY] Product_Collection: 2 [SUMMARY] Product_Document: 1 [SUMMARY] Package ID: 31f92e4b-8222-44c0-9480-f0a69023aecea /Users/rchen/Desktop/test/testHvt> registry-manager load-data -dir /tmp/harvest/out Elasticsearch URL: http://localhost:9200 Index: registry Updating schema with fields from /tmp/harvest/out/fields.txt Updated 6 fields Loading file: /tmp/harvest/out/refs-docs.json Loaded 3 document(s) Loading file: /tmp/harvest/out/registry-docs.json Loaded 4 document(s)</pre>
Step 15: the WARNs show that harvest skips bundle.xml and 2 collections	<pre>[SUMMARY] Output directory: /tmp/harvest/out [SUMMARY] Output format: json [SUMMARY] Reading configuration from /Users/rchen/Desktop/test/testHvt/policy/regapp130c.xml [INFO] Processing bundle directory /Users/rchen/Desktop/test/testHvt/regapp130c [INFO] Processing bundle /Users/rchen/Desktop/test/testHvt/regapp130c/bundle_cassini_saturn_radar_maps.xml [WARN] Bundle urn:nasa:pds:cassini_saturn_radar_maps::1.1 already registered [INFO] Processing collection /Users/rchen/Desktop/test/testHvt/regapp130c/context/collection_context_cassini_saturn_radar_maps.xml [WARN] Collection urn:nasa:pds:cassini_saturn_radar_maps:context::1.0 already registered [INFO] Processing collection /Users/rchen/Desktop/test/testHvt/regapp130c/data_derived/collection_data_cassini_saturn_radar_maps.xml [INFO] Processing collection /Users/rchen/Desktop/test/testHvt/regapp130c/document/collection_document_cassini_saturn_radar_maps.xml [WARN] Collection urn:nasa:pds:cassini_saturn_radar_maps:document::1.0 already registered [INFO] Processing collection /Users/rchen/Desktop/test/testHvt/regapp130c/xml_schema/collection_schema_cassini_saturn_radar_maps.xml [INFO] Processing products... [INFO] Processing product /Users/rchen/Desktop/test/testHvt/regapp130c/data_derived/xtra.xml [INFO] Processing product /Users/rchen/Desktop/test/testHvt/regapp130c/data_derived/Saturn_015.xml [INFO] Processing product /Users/rchen/Desktop/test/testHvt/regapp130c/data_derived/Saturn_015_pg.xml [SUMMARY] Summary: [SUMMARY] Skipped files: 4 [SUMMARY] Processed files: 5 [SUMMARY] File counts by type: [SUMMARY] Product_Collection: 2 [SUMMARY] Product_Observational: 3 [SUMMARY] Package ID: c6c13d97-3c70-4b44-87b9-a4f8782636f4</pre>
Step 16:	<pre>4 4 1339 /tmp/harvest/out/refs-docs.json 10 63 3803 /tmp/harvest/out/registry-docs.json</pre>
Step 17:	<pre>[SUMMARY] Output directory: /tmp/harvest/out [SUMMARY] Output format: json [SUMMARY] Reading configuration from /Users/rchen/Desktop/test/testHvt/policy/regapp142.xml [WARN] Registry is not configured</pre>

	<pre>[INFO] Processing directory: /Users/rchen/Desktop/test/testHvt/regapp142 [INFO] Processing /Users/rchen/Desktop/test/testHvt/regapp142/FIPS_NOBS_2011082_DDR_V03.xml [SUMMARY] Summary: [SUMMARY] Skipped files: 0 [SUMMARY] Processed files: 1 [SUMMARY] File counts by type: [SUMMARY] Product_Observational: 1 [SUMMARY] Package ID: cd5c3506-32fb-46bf-ac8e-99a5fbe5eeee</pre>
Step 18:	The issue asked for an actionable error message. Looks good. Elasticsearch URL: http://localhost:9200 Index: registry Updating schema with fields from /tmp/harvest/out/fields.txt [ERROR] Could not find datatype for field 'mess:MESSENGER/mess:mission_phase_name'. See ' https://nasa-pds.github.io/pds-registry-app/operate/common-ops.html#Load ' for more information.
Step 19:	the config file had no nodeName [SUMMARY] Output directory: /tmp/harvest/out [SUMMARY] Output format: json [SUMMARY] Reading configuration from /Users/rchen/Desktop/test/testHvt/policy/regapp147a.xml [ERROR] Invalid Harvest configuration: 'harvest' element is missing required attribute 'nodeName'
Step 20:	the config file had a bad nodeName [SUMMARY] Output directory: /tmp/harvest/out [SUMMARY] Output format: json [SUMMARY] Reading configuration from /Users/rchen/Desktop/test/testHvt/policy/regapp147b.xml [ERROR] Invalid Harvest configuration: '/harvest@nodeName' attribute has invalid value: 'somethingbad'. Please use one of the following values: JAXA - Japan Aerospace Exploration Agency PDS_ATM - Planetary Data System: Atmospheres Node PDS_ENG - Planetary Data System: Engineering Node PDS_GEO - Planetary Data System: Geosciences Node PDS_IMG - Planetary Data System: Imaging Node PDS_NAIF - Planetary Data System: NAIF Node PDS_PPI - Planetary Data System: Planetary Plasma Interactions Node PDS_RMS - Planetary Data System: Rings Node PDS_SBN - Planetary Data System: Small Bodies Node at University of Maryland PSA - Planetary Science Archive ROSCOSMOS - Russian State Corporation for Space Activities
Step 24:	"pds:File/pds:file_size" : ["253", "14866"]
Step 25:	same values as previous step -rw-rw-r--@ 1 rchen JPL\Domain Users 253 May 26 10:02 EUV2005_103_16_34_ST1_results.csv -rw-rw-r--@ 1 rchen JPL\Domain Users 14866 Jan 26 09:06 EUV2005_103_16_34_ST1_results.dat
Step 29:	bundle has 1 secondary collection <Bundle Member Entry> <id_reference>urn:nasa:pds:insight_documents:document_seis</id_reference> <member_status>Secondary</member_status>
Step 30:	the 1 secondary collection shows up here "ref_id_collection_secondary" : "urn:nasa:pds:insight_documents:document_seis",
Step 34:	xml_schema/collection.csv. The first is actually present in xml_schema/ S,urn:nasa:pds:system_bundle:xml_schema:insight-xml_schema::1.17 S,urn:nasa:pds:system_bundle:xml_schema:pds-xml_schema::1.17
Step 35:	the 2 secondary products show up in the list of LIDVIDs and LIDs "urn:nasa:pds:system_bundle:xml_schema:insight-xml_schema::1.17", "urn:nasa:pds:system_bundle:xml_schema:pds-xml_schema::1.17" "urn:nasa:pds:system_bundle:xml_schema:insight-xml_schema", "urn:nasa:pds:system_bundle:xml_schema:pds-xml_schema"
Step 38:	If registry-manager already has the OREX dd, normal good message. Else: Elasticsearch URL: http://localhost:9200 Index: registry Updating schema with fields from /tmp/harvest/out/fields.txt [ERROR] Could not find datatype for field 'orex:Mission_Information/orex:mission_phase_identifier'. See ' https://nasa-pds.github.io/pds-registry-app/operate/common-ops.html#Load ' for more information.
Step 39:	if this step was needed: Elasticsearch URL: http://localhost:9200 Index: registry

	<pre>Data dictionary: regapp10/orex_ldd_OREX_1300.JSON Will export data dictionary to ES NJSON /var/folders/0x/dd4whw6d5lq49dxjfhjscrw3nnmlk/T/pds-registry-dd.tmp.json Loading data type configuration from /Users/rchen/PDS4tools/registry-manager/elasticsearch/data-dic-types.cfg Parsing attribute dictionary... Parsing class and attribute associations... Loading file: /var/folders/0x/dd4whw6d5lq49dxjfhjscrw3nnmlk/T/pds-registry-dd.tmp.json Loaded 1567 document(s)</pre> <p>Step 40: load-data success is sufficient. Some of the fields that used to cause a crash:</p>
Comments	Results met success criteria
Date of Testing	2021.06.05
Test Personnel	Richard Chen

Test Case ID	SCMA.1
Description	Verify changes made to the IM schema and schematron.
Requirements	PASS 1.3.3: PDS will provide criteria for validating archival products
Success Criteria	Validate tool accepts (or rejects) constructs deemed as valid (or invalid), primarily through software change requests.
Test Steps	Document testScma.docx describes the testing of the PDS4 schema and schematron.
Test Results	<p>The documentation of the testing of the information model is roughly the size of this document, so that documentation has been placed in its own document, testScma.docx. For build 11.1, testScma.docx shows tests of:</p> <ul style="list-style-type: none"> - im#271 - im#277 - im#280 - im#283

	<ul style="list-style-type: none"> - im#293 - im#298
Comments	Results met success criteria.
Date of Testing	2021.05.28
Test Personnel	Richard Chen

Test Case ID	SCMA.2
Description	Use LDDTool to create local data dictionaries
Requirements	PASS 1.3.3: PDS will provide criteria for validating archival products
Success Criteria	Validate uses the created local data dictionary to validate a label.
Test Steps	<ol style="list-style-type: none"> 1. cd /Users/rchen/Desktop/test/testLDD 2. validate -x ../PDS4_PDS_1G00.xsd -S ../PDS4_PDS_1G00.sch -t ccb235a.xml 3. validate -x ../PDS4_PDS_1G00.xsd -S ../PDS4_PDS_1G00.sch -t ccb235liddininput.xml 4. lddtool -pl ccb235liddininput.xml 5. validate -x ../PDS4_PDS_1G00.xsd PDS4_INSIGHT_1G00_1G00.xsd -S ../PDS4_PDS_1G00.sch PDS4_INSIGHT_1G00_1G00.sch -t ccb235a.xml 6. rm PDS4 INSIGHT_1G00_1G00.*
Test Results	<p>Step 2:</p> <pre> PDS Validate Tool Report Configuration: Version 2.0.6 Date 2021-05-28T08:18:40Z Parameters: Targets [file:/Users/rchen/Desktop/test/testLDD/ccb235a.xml] User Specified Schemas [file:/Users/rchen/Desktop/test/PDS4_PDS_1G00.xsd] User Specified Schematrons [file:/Users/rchen/Desktop/test/PDS4_PDS_1G00.sch] Severity Level WARNING Recurse Directories true File Filters Used [*.xml, *.XML] Data Content Validation on Product Level Validation on Max Errors 100000 Registered Contexts File /Users/rchen/PDS4tools/validate/resources/registered_context_products.json Product Level Validation Results FAIL: file:/Users/rchen/Desktop/test/testLDD/ccb235a.xml ERROR [error.label.schema] line 60, 46: cvc-complex-type.2.4.c: The matching wildcard is strict, but no declaration can be found for element 'insight:Observation_Information'. 1 product validation(s) completed Summary: 1 error(s) 0 warning(s) Product Validation Summary: 0 product(s) passed 1 product(s) failed 0 product(s) skipped Referential Integrity Check Summary: 0 check(s) passed 0 check(s) failed 0 check(s) skipped Message Types: 1 error.label.schema End of Report Completed execution in 2823 ms </pre> <p>Step 3: Standard good message</p> <p>Step 4:</p> <pre> >> INFO LDDTOOL Version: 13.1.0-SNAPSHOT >> INFO IM Version Id: 1.16.0.0 </pre>

	<pre>>> INFO IM Namespace Id: pds >> INFO IM Label Version Id: 1.0 >> INFO Date: Fri May 28 01:20:34 PDT 2021 >> INFO PARENT_DIR: /Users/rchen/PDS4tools/lddtool >> INFO SCRIPT_DIR: /Users/rchen/PDS4tools/lddtool/bin >> INFO LIB_DIR: /Users/rchen/PDS4tools/lddtool/lib >>> INFO Init: - Config.Properties Namespace Id Using:pds >>> INFO Init: - LDD Dictionary_Type is Mission >>> WARNING Init: - Config.Properties Namespace Id Not Found:insight >>> WARNING Header: - New steward has been specified:geo >>> WARNING Header: - New namespace id has been specified:insight -- LDDTool Execution Summary -- 3 warning(s) 0 error(s) 0 fatal error(s) >> INFO Exit(0)</pre> <p>Step 5: Standard good message</p>
Comments	Results met success criteria.
Date of Testing	2021.05.28
Test Personnel	Richard Chen

Test Case ID	SCMA.3
Description	<p>Test various capabilities described in release 10b.</p> <p>RDD 10b issues left to test after SCMA.1: im#74, im#77, im#79, im#81, im#93, im#105, im#109, im#111, im#125, im#127, im#154, im#180</p>
Requirements	<p>PASS 1.3.3: PDS will provide criteria for validating archival products</p> <p>PASS pds4-information-model#180: LDDTool incorrectly handles "unbounded" maximum cardinality in Choice blocks</p>
Success Criteria	Verify proper handling of build 10b issues not covered by SCMA.1
Test Steps	<p>All executions of lddtool below verify im#77, im#79, im#81</p> <ol style="list-style-type: none"> 1. cd /Users/rchen/Desktop/test/testLDD 2. lddtool -v #im#74 3. lddtool -plD im93atm.xml im93naif.xml #im#93 <p>You could view the output DocBook (export/DD/PDS4_PDS_DD_1E00.xml); instead</p> <ol style="list-style-type: none"> 4. grep XX im93* export/DD/PDS4_PDS_DD_1E00.xml # show LDD in DocBook 5. cp im93naif.xml x.xml; lddtool -pl x.xml; rm x.xml #im#111 6. lddtool -pl im125liddinput.xml #im#125; nillable inside class works 7. validate -x ../PDS4_PDS_1G00.xsd PDS4_MAVEN_1G00_1G00.xsd -S ../PDS4_PDS_1G00.sch PDS4_MAVEN_1G00_1G00.sch -t im125.xml 8. lddtool -plM im125liddinput #im#154, fail nicely if -M 9. lddtool -pl im180liddinput.xml #im#180, max=* -> maxOccurs="unbounded" 10. grep "<xs:choice" PDS4_GEOMETRY_1G00_1G00.xsd 11. validate -x ../PDS4_PDS_1G00.xsd PDS4_GEOMETRY_1G00_1G00.xsd -S ../PDS4_PDS_1G00.sch -t im180.xml 12. rm PDS4_*_1G00_1G00.*
Test Results	<p>Step 2: show software version & IM version</p> <p>LDDTool Version: 13.1.0-SNAPSHOT Built with IM Version: 1.16.0.0 Build Date: 2021-05-20 15:08:21 Configured IM Versions: [1G00, 1F00, 1E00, 1D00, 1C00, 1B10, 1B00]</p> <p>Step 3:</p> <pre>>> INFO LDDTOOL Version: 13.1.0-SNAPSHOT >> INFO IM Version Id: 1.16.0.0 >> INFO IM Namespace Id: pds >> INFO IM Label Version Id: 1.0 >> INFO Date: Mon May 31 10:30:53 PDT 2021</pre>

```

>> INFO PARENT_DIR: /Users/rchen/PDS4tools/lddtool
>> INFO SCRIPT_DIR: /Users/rchen/PDS4tools/lddtool/bin
>> INFO LIB_DIR: /Users/rchen/PDS4tools/lddtool/lib
>>> INFO Init: - Config.Properties Namespace Id Found:atm
>>> INFO Init: - Config.Properties Namespace Id Using:atm
>>> INFO Init: - LDD Dictionary_Type is Mission
>>> INFO Init: - Config.Properties Namespace Id Found:naif
>>> INFO Init: - Config.Properties Namespace Id Using:naif
>>> INFO Init: - LDD Dictionary_Type is Mission
>>> INFO Attribute: <type_list_identifier> - The default minimum characters provided by the attribute's data type is being overridden with 1
>>> INFO Attribute: <type_list_identifier> - The default maximum characters provided by the attribute's data type is being overridden with 255
>>> INFO Attribute: <type> - The default minimum characters provided by the attribute's data type is being overridden with 1
>>> INFO Attribute: <type> - The default maximum characters provided by the attribute's data type is being overridden with 255
>>> INFO Attribute: <type> - This local attribute has a duplicate in the PDS4 data dictionary.
>>> INFO Attribute: <type> - This local attribute has a duplicate in the PDS4 data dictionary.
>>> INFO Attribute: <type> - This local attribute has a duplicate in the PDS4 data dictionary.
>>> INFO Attribute: <type> - This local attribute has a duplicate in the PDS4 data dictionary.
>>> INFO Attribute: <type> - This local attribute has a duplicate in the PDS4 data dictionary.
>>> INFO Attribute: <type> - This local attribute has a duplicate in the PDS4 data dictionary.
>>> INFO Attribute: <type> - This local attribute has a duplicate in the PDS4 data dictionary.
>>> INFO Attribute: <type> - This local attribute has a duplicate in the PDS4 data dictionary.
-- LDDTool Execution Summary --
    4 warning(s)
    0 error(s)
    0 fatal error(s)
>> INFO Exit(0)

```

Step 4:

```

im93atm.xml:  <name>XXATMType_List</name>
im93atm.xml:  <local_identifier>XXATMType_List</local_identifier>
im93naif.xml:  <name>XXNAIFObservation_Information</name>
im93naif.xml:  <local_identifier>XXNAIFObservation_Information</local_identifier>
export/DD/PDS4_PDS_DD_1E00.xml:  <title><anchor xml:id="N1927552474">XXATMType_List</title>
export/DD/PDS4_PDS_DD_1E00.xml:  <entry namest="c1" nameend="c3"
align="left"><emphasis>Name: </emphasis>XXATMType_List</entry>
export/DD/PDS4_PDS_DD_1E00.xml:  <entry namest="c1" nameend="c4"
align="left"><emphasis>Class Hierarchy: </emphasis><link
linkend="N1927552474">XXATMType_&#x200B;List</link></entry>
export/DD/PDS4_PDS_DD_1E00.xml:  <title>type in <link
linkend="N1927552474">XXATMType_&#x200B;List</link></title>
export/DD/PDS4_PDS_DD_1E00.xml:  <entry><emphasis>Class Name: </emphasis><link
linkend="N1927552474">XXATMType_&#x200B;List</link></entry>
export/DD/PDS4_PDS_DD_1E00.xml:  <title>type_list_identifier in <link
linkend="N1927552474">XXATMType_&#x200B;List</link></title>
export/DD/PDS4_PDS_DD_1E00.xml:  <entry><emphasis>Class Name: </emphasis><link
linkend="N1927552474">XXATMType_&#x200B;List</link></entry>
export/DD/PDS4_PDS_DD_1E00.xml:  <title><anchor xml:id="N-1198652248">XXNAIFObservation_Information</title>
export/DD/PDS4_PDS_DD_1E00.xml:  <entry namest="c1" nameend="c3"
align="left"><emphasis>Name: </emphasis>XXNAIFObservation_Information</entry>
export/DD/PDS4_PDS_DD_1E00.xml:  <entry namest="c1" nameend="c4"
align="left"><emphasis>Class Hierarchy: </emphasis><link linkend="N-1198652248">XXNAIFObservation_&#x200B;Information</link></entry>
export/DD/PDS4_PDS_DD_1E00.xml:  <title>bibcode in <link linkend="N-1198652248">XXNAIFObservation_&#x200B;Information</link></title>
export/DD/PDS4_PDS_DD_1E00.xml:  <entry><emphasis>Class Name: </emphasis><link linkend="N-1198652248">XXNAIFObservation_&#x200B;Information</link></entry>
export/DD/PDS4_PDS_DD_1E00.xml:  <title>mission_phase_name_type in <link linkend="N-1198652248">XXNAIFObservation_&#x200B;Information</link></title>
export/DD/PDS4_PDS_DD_1E00.xml:  <entry><emphasis>Class Name: </emphasis><link linkend="N-1198652248">XXNAIFObservation_&#x200B;Information</link></entry>
export/DD/PDS4_PDS_DD_1E00.xml:  <title>release_number in <link linkend="N-1198652248">XXNAIFObservation_&#x200B;Information</link></title>

```

	<pre>export/DD/PDS4_PDS_DD_1E00.xml: <entry><emphasis>Class Name: </emphasis><link linkend="N-1198652248">XXNAIFObservation_&#x200B;Information</link></entry></pre>																															
Step 5:	<pre>>> INFO LDDTOOL Version: 13.1.0-SNAPSHOT >> INFO IM Version Id: 1.16.0.0 >> INFO IM Namespace Id: pds >> INFO IM Label Version Id: 1.0 >> INFO Date: Mon May 31 10:48:21 PDT 2021 >> INFO PARENT_DIR: /Users/rchen/PDS4tools/lddtool >> INFO SCRIPT_DIR: /Users/rchen/PDS4tools/lddtool/bin >> INFO LIB_DIR: /Users/rchen/PDS4tools/lddtool/lib >>> INFO Init: - Config.Properties Namespace Id Found:naif >>> INFO Init: - Config.Properties Namespace Id Using:naif >>> INFO Init: - LDD Dictionary_Type is Mission >>> WARNING Header: - New steward has been specified:geo >>> WARNING Header: - New namespace id has been specified:naif -- LDDTool Execution Summary -- 2 warning(s) 0 error(s) 0 fatal error(s) >> INFO Exit(0)</pre>																															
Step 6:	<pre>>> INFO LDDTOOL Version: 13.1.0-SNAPSHOT >> INFO IM Version Id: 1.16.0.0 >> INFO IM Namespace Id: pds >> INFO IM Label Version Id: 1.0 >> INFO Date: Mon May 31 10:49:43 PDT 2021 >> INFO PARENT_DIR: /Users/rchen/PDS4tools/lddtool >> INFO SCRIPT_DIR: /Users/rchen/PDS4tools/lddtool/bin >> INFO LIB_DIR: /Users/rchen/PDS4tools/lddtool/lib >>> INFO Init: - Config.Properties Namespace Id Using:pds >>> INFO Init: - LDD Dictionary_Type is Mission >>> WARNING Init: - Config.Properties Namespace Id Not Found:maven >>> WARNING Header: - New steward has been specified:geo >>> WARNING Header: - New namespace id has been specified:maven -- LDDTool Execution Summary -- 3 warning(s) 0 error(s) 0 fatal error(s) >> INFO Exit(0)</pre>																															
Step 7: Standard good message	<p>PDS Validate Tool Report</p> <p>Configuration:</p> <table> <tbody> <tr> <td>Version</td> <td>2.0.6</td> </tr> <tr> <td>Date</td> <td>2021-05-31T17:53:29Z</td> </tr> </tbody> </table> <p>Parameters:</p> <table> <tbody> <tr> <td>Targets</td> <td>[file:/Users/rchen/Desktop/test/testLDD/im125.xml]</td> </tr> <tr> <td>User Specified Schemas</td> <td>[file:/Users/rchen/Desktop/test/PDS4_PDS_1G00.xsd, file:/Users/rchen/Desktop/test/testLDD/PDS4_MAVEN_1G00.xsd]</td> </tr> <tr> <td>User Specified Schematrons</td> <td>[file:/Users/rchen/Desktop/test/PDS4_PDS_1G00.sch, file:/Users/rchen/Desktop/test/testLDD/PDS4_MAVEN_1G00.sch]</td> </tr> <tr> <td>Severity Level</td> <td>WARNING</td> </tr> <tr> <td>Recurse Directories</td> <td>true</td> </tr> <tr> <td>File Filters Used</td> <td>[*.xml, *.XML]</td> </tr> <tr> <td>Data Content Validation</td> <td>on</td> </tr> <tr> <td>Product Level Validation</td> <td>on</td> </tr> <tr> <td>Max Errors</td> <td>100000</td> </tr> <tr> <td>Registered Contexts File</td> <td>/Users/rchen/PDS4tools/validate/resources/registered_context_products.json</td> </tr> </tbody> </table> <p>Product Level Validation Results</p> <table> <tbody> <tr> <td>PASS: file:/Users/rchen/Desktop/test/testLDD/im125.xml</td> </tr> <tr> <td>1 product validation(s) completed</td> </tr> </tbody> </table> <p>Summary:</p> <table> <tbody> <tr> <td>0 error(s)</td> </tr> <tr> <td>0 warning(s)</td> </tr> </tbody> </table> <p>Product Validation Summary:</p> <table> <tbody> <tr> <td>1 product(s) passed</td> </tr> <tr> <td>0 product(s) failed</td> </tr> <tr> <td>0 product(s) skipped</td> </tr> </tbody> </table> <p>Referential Integrity Check Summary:</p>	Version	2.0.6	Date	2021-05-31T17:53:29Z	Targets	[file:/Users/rchen/Desktop/test/testLDD/im125.xml]	User Specified Schemas	[file:/Users/rchen/Desktop/test/PDS4_PDS_1G00.xsd, file:/Users/rchen/Desktop/test/testLDD/PDS4_MAVEN_1G00.xsd]	User Specified Schematrons	[file:/Users/rchen/Desktop/test/PDS4_PDS_1G00.sch, file:/Users/rchen/Desktop/test/testLDD/PDS4_MAVEN_1G00.sch]	Severity Level	WARNING	Recurse Directories	true	File Filters Used	[*.xml, *.XML]	Data Content Validation	on	Product Level Validation	on	Max Errors	100000	Registered Contexts File	/Users/rchen/PDS4tools/validate/resources/registered_context_products.json	PASS: file:/Users/rchen/Desktop/test/testLDD/im125.xml	1 product validation(s) completed	0 error(s)	0 warning(s)	1 product(s) passed	0 product(s) failed	0 product(s) skipped
Version	2.0.6																															
Date	2021-05-31T17:53:29Z																															
Targets	[file:/Users/rchen/Desktop/test/testLDD/im125.xml]																															
User Specified Schemas	[file:/Users/rchen/Desktop/test/PDS4_PDS_1G00.xsd, file:/Users/rchen/Desktop/test/testLDD/PDS4_MAVEN_1G00.xsd]																															
User Specified Schematrons	[file:/Users/rchen/Desktop/test/PDS4_PDS_1G00.sch, file:/Users/rchen/Desktop/test/testLDD/PDS4_MAVEN_1G00.sch]																															
Severity Level	WARNING																															
Recurse Directories	true																															
File Filters Used	[*.xml, *.XML]																															
Data Content Validation	on																															
Product Level Validation	on																															
Max Errors	100000																															
Registered Contexts File	/Users/rchen/PDS4tools/validate/resources/registered_context_products.json																															
PASS: file:/Users/rchen/Desktop/test/testLDD/im125.xml																																
1 product validation(s) completed																																
0 error(s)																																
0 warning(s)																																
1 product(s) passed																																
0 product(s) failed																																
0 product(s) skipped																																

	<pre> 0 check(s) passed 0 check(s) failed 0 check(s) skipped End of Report Completed execution in 2802 ms </pre> <p>Step 8: In 10.b, this failed. In 11.1, this gets a warning</p> <pre> >> INFO LDDTOOL Version: 13.1.0-SNAPSHOT >> INFO IM Version Id: 1.16.0.0 >> INFO IM Namespace Id: pds >> INFO IM Label Version Id: 1.0 >> INFO Date: Mon May 31 10:54:41 PDT 2021 >> INFO PARENT_DIR: /Users/rchen/PDS4tools/lddtool >> INFO SCRIPT_DIR: /Users/rchen/PDS4tools/lddtool/bin >> INFO LIB_DIR: /Users/rchen/PDS4tools/lddtool/lib >> WARNING The -M flag has been deprecated as of PDS4 IM Version 1.14.0.0. See the LDDTool User's Manual for more information on how to provide this information. >>> INFO Init: - Config.Properties Namespace Id Using:pds >>> INFO Init: - LDD Dictionary_Type is Mission >>> WARNING Init: - Config.Properties Namespace Id Not Found:maven >>> WARNING Header: - New steward has been specified:geo >>> WARNING Header: - New namespace id has been specified:maven -- LDDTool Execution Summary -- 4 warning(s) 0 error(s) 0 fatal error(s) >> INFO Exit(0) </pre> <p>Step 9:</p> <pre> >> INFO LDDTOOL Version: 13.1.0-SNAPSHOT >> INFO IM Version Id: 1.16.0.0 >> INFO IM Namespace Id: pds >> INFO IM Label Version Id: 1.0 >> INFO Date: Mon May 31 10:56:51 PDT 2021 >> INFO PARENT_DIR: /Users/rchen/PDS4tools/lddtool >> INFO SCRIPT_DIR: /Users/rchen/PDS4tools/lddtool/bin >> INFO LIB_DIR: /Users/rchen/PDS4tools/lddtool/lib >> INFO Init: - Config.Properties Namespace Id Using:pds >> INFO Init: - LDD Dictionary_Type is Discipline >>> WARNING Init: - Config.Properties Namespace Id Not Found:geometry >>> WARNING Header: - New steward has been specified:geo >>> WARNING Header: - New namespace id has been specified:geometry -- LDDTool Execution Summary -- 3 warning(s) 0 error(s) 0 fatal error(s) >> INFO Exit(0) </pre> <p>Step 10: for a while, lddtool returned maxOccurs="*">>, which is bad <xs:choice minOccurs="1" maxOccurs="unbounded"></p> <p>Step 11: Standard good message</p>
Comments	Results met success criteria.
Date of Testing	2021.05.31
Test Personnel	Richard Chen

Test Case ID	SCMA.4
Description	Improvement LDDTool: Add PDS Namespace Registry information to Help output
Requirements	PASS im#172: Add PDS Namespace Registry information to Help output
Success Criteria	'lddtool -h` (or another option?) to see configured namespaces
Test Steps	<ol style="list-style-type: none"> 1. lddtool --help #im#172 2. lddtool -plN ccb235liddinput.xml
Test Results	<p>Step 1:</p> <pre> Usage: lddtool -pl [OPTION]... FILE1 FILE2 ... Parse a local data dictionary definition file and generate PDS4 data standard files. </pre>

	<p>Example: lddtool -pl inputFileName</p> <p>Process control:</p> <ul style="list-style-type: none"> -p, --PDS4 Set the context to PDS4 -l, --LDD Process a local data dictionary input file. -D, --DataDict Write the Data Dictionary DocBook file. -J, --JSON Write the data dictionary to a JSON formatted file. -m, --merge Generate file to merge the local dictionary into the master dictionary -M, --Mission This option has no effect starting with PDS4 IM Version 1.14.0.0. See the LDDTool User's Manual for more information on how to provide this information. <p>-n, --nuance Write nuance property maps to LDD schema annotation in JSON</p> <p>-N, --Namespace Print the list of configured namespaces to the log</p> <p>-I, --IM Spec Write the Information Model Specification for an LDD.</p> <p>-v, --version Returns the LDDTool version number</p> <p>-h, --help Print this message</p> <p>-V, --IM Version - E.g., -V 1D00.</p> <p>The configured IM Versions are:[1G00, 1F00, 1E00, 1D00, 1C00, 1B10, 1B00]</p> <p>Input control:</p> <p>FILE provides the file name of an input file. The file name extension .xml is assumed. If there are more than one file, the first files are considered references for the last file. The last file is considered the primary local data dictionary.</p> <p>Output control:</p> <p>FILE is used to provide the file name for the output files. The file name extensions are distinct.</p> <ul style="list-style-type: none"> .xsd -- XML Schema file .sch -- schematron file .xml -- label file .csv -- data dictionary information in csv formatted file. .JSON -- dump of model in JSON format. .txt -- process report in text format .pont -- ontology file for merge <p>Step 2:</p> <pre>>> INFO Configured NameSpaceIds:[alt, atm, bc, bc_mpo_bel, bc_mpo_ber, bc_mpo_isa, bc_mpo_mag, bc_mpo_mer, bc_mpo_mgn, bc_mpo_mix, bc_mpo_mre, bc_mpo_phe, bc_mpo_sim, bc_mpo_six, bc_mpo_srn, bc_mtm_cam, cart, chan1, clementine, ctli, darts, disp, em16, em16_tgo_acs, em16_tgo_cas, em16_tgo_frd, em16_tgo_nmd, emrsp, emrsp_rm, emrsp_rm_arm, emrsp_rm_clu, emrsp_rm_ise, emrsp_rm_loc, emrsp_rm_mic, emrsp_rm_mis, emrsp_rm_mom, emrsp_rm_nav, emrsp_rm_pan, emrsp_rm_rls, emrsp_rm_wis, epn, geo, geom, hyb2, img, img_surface, isda, mars2020, mer, ml, msn, msn_surface, multi, naif, nucspec, particle, pds, ppi, proc, psa, rings, rs, rsss, sbn, sp, speclib, survey, wave] >> INFO LDDTOOL Version: 13.1.0-SNAPSHOT >> INFO IM Version Id: 1.16.0.0 >> INFO IM Namespace Id: pds >> INFO IM Label Version Id: 1.0 >> INFO Date: Mon May 31 11:14:27 PDT 2021 >> INFO PARENT_DIR: /Users/rchen/PDS4tools/lddtool >> INFO SCRIPT_DIR: /Users/rchen/PDS4tools/lddtool/bin >> INFO LIB_DIR: /Users/rchen/PDS4tools/lddtool/lib >>> INFO Init: - Config.Properties Namespace Id Using:pds >>> INFO Init: - LDD Dictionary_Type is Mission >>> WARNING Init: - Config.Properties Namespace Id Not Found:insight >>> WARNING Header: - New steward has been specified:geo >>> WARNING Header: - New namespace id has been specified:insight -- LDDTool Execution Summary -- 3 warning(s) 0 error(s) 0 fatal error(s) >> INFO Exit(0)</pre>
Comments	Results met success criteria.
Date of Testing	2021.05.31
Test Personnel	Richard Chen

Test Case ID	SCMA.5
Description	Improvement LDDTool: Add error counter or flag to enable unsuccessful termination System.exit
Requirements	PASS im#176: Add error counter or flag to enable unsuccessful termination System.exit

Success Criteria	Run lddtool with bad input, then `echo \$?`, which should print not 0.
Test Steps	<ol style="list-style-type: none"> 1. lddtool -pl PDS4_IMG_IngestLDD.xml #im#176 2. echo \$?
Test Results	<p>Step 1:</p> <pre> Usage: lddtool -pl [OPTION]... FILE1 FILE2 ... Parse a local data dictionary definition file and generate PDS4 data standard files. Example: lddtool -pl inputFileName Process control: -p, --PDS4 Set the context to PDS4 -l, --LDD Process a local data dictionary input file -D, --DataDict Write the Data Dictionary DocBook file. -J, --JSON Write the data dictionary to a JSON formatted file. -m, --merge Generate file to merge the local dictionary into the master dictionary -M, --Mission This option has no effect starting with PDS4 IM Version 1.14.0.0. See the LDDTool User's Manual for more information on how to provide this information. -n, --nuance Write nuance property maps to LDD schema annotation in JSON -N, --Namespace Print the list of configured namespaces to the log -I, --IM Spec Write the Information Model Specification for an LDD. -v, --version Returns the LDDTool version number -h, --help Print this message -V, --IM Version - E.g., -V 1D00. The configured IM Versions are:[1G00, 1F00, 1E00, 1D00, 1C00, 1B10, 1B00] Input control: FILE provides the file name of an input file. The file name extension .xml is assumed. If there are more than one file, the first files are considered references for the last file. The last file is considered the primary local data dictionary. Output control: FILE is used to provide the file name for the output files. The file name extensions are distinct. .xsd -- XML Schema file .sch -- schematron file .xml -- label file .csv -- data dictionary information in csv formatted file. .JSON -- dump of model in JSON format. .txt -- process report in text format .pont -- ontology file for merge >> ERROR Input file not found: PDS4_IMG_IngestLDD.xml >> ERROR Input file not found: pds4_img_ingestldd.xml >> ERROR Input file not found: PDS4_IMG_INGESTLDD.XML >> FATAL ERROR Input file not found: PDS4_IMG_IngestLDD.xml -- LDDTool Execution Summary -- 0 warning(s) 3 error(s) 1 fatal error(s) </pre> <p>Step 2:</p> <ol style="list-style-type: none"> 1
Comments	Results met success criteria.
Date of Testing	2021.05.31
Test Personnel	Richard Chen

Test Case ID	SCMA.6
Description	Improvement LDDTool: Improve error messages to clearly designate between FATAL_ERROR vs ERROR
Requirements	PASS im#178: Improve error messages to clearly designate between FATAL_ERROR vs ERROR
Success Criteria	Run lddtool with a nonexistent input file to see FATAL_ERROR. Run lddtool with an input file with a mild syntax error to see ERROR.
Test Steps	<ol style="list-style-type: none"> 1. lddtool -pl im178lddinputBad.xml.xxx # im#178 this file doesn't exit 2. lddtool -pl im178lddinputBad.xml # this file has a mistake
Test Results	<p>Step 1:</p> <pre> Usage: lddtool -pl [OPTION]... FILE1 FILE2 ... Parse a local data dictionary definition file and generate PDS4 data standard files. </pre>

	<p>Example: lddtool -pl inputFileName</p> <p>Process control:</p> <ul style="list-style-type: none"> -p, --PDS4 Set the context to PDS4 -l, --LDD Process a local data dictionary input file -D, --DataDict Write the Data Dictionary DocBook file. -J, --JSON Write the data dictionary to a JSON formatted file. -m, --merge Generate file to merge the local dictionary into the master dictionary -M, --Mission This option has no effect starting with PDS4 IM Version 1.14.0.0. See the LDDTool User's Manual for more information on how to provide this information. <p>-n, --nuance Write nuance property maps to LDD schema annotation in JSON</p> <p>-N, --Namespace Print the list of configured namespaces to the log</p> <p>-I, --IM Spec Write the Information Model Specification for an LDD.</p> <p>-v, --version Returns the LDDTool version number</p> <p>-h, --help Print this message</p> <p>-V, --IM Version - E.g., -V 1D00.</p> <p>The configured IM Versions are:[1G00, 1F00, 1E00, 1D00, 1C00, 1B10, 1B00]</p> <p>Input control:</p> <ul style="list-style-type: none"> FILE provides the file name of an input file. The file name extension .xml is assumed. If there are more than one file, the first files are considered references for the last file. The last file is considered the primary local data dictionary. <p>Output control:</p> <ul style="list-style-type: none"> FILE is used to provide the file name for the output files. The file name extensions are distinct. .xsd -- XML Schema file .sch -- schematron file .xml -- label file .csv -- data dictionary information in csv formatted file. .JSON -- dump of model in JSON format. .txt -- process report in text format .pont -- ontology file for merge <pre>>> ERROR Input file not found: im178lddinputBad.xml.xxx >> ERROR Input file not found: im178lddinputbad.xml.xxx >> ERROR Input file not found: IM178LDDINPUTBAD.XML.XXX >> FATAL ERROR Input file not found: im178lddinputBad.xml.xxx -- LDDTool Execution Summary -- 0 warning(s) 3 error(s) 1 fatal error(s)</pre>
Step 2:	<pre>>> INFO LDDTOOL Version: 13.1.0-SNAPSHOT >> INFO IM Version Id: 1.16.0.0 >> INFO IM Namespace Id: pds >> INFO IM Label Version Id: 1.0 >> INFO Date: Tue Jun 01 01:12:21 PDT 2021 >> INFO PARENT_DIR: /Users/rchen/PDS4tools/lddtool >> INFO SCRIPT_DIR: /Users/rchen/PDS4tools/lddtool/bin >> INFO LIB_DIR: /Users/rchen/PDS4tools/lddtool/lib >>> ERROR Class: - At least one value for pds:local_reference_type or pds:reference_type must be defined for tbd_ingest_ldd:Processing_Information/pds:Local_Internal_Reference. >>> ERROR Class: - At least one value for pds:local_reference_type or pds:reference_type must be defined for tbd_ingest_ldd:Software/pds:Internal_Reference. >>> INFO Init: - Config.Properties Namespace Id Using;pds >>> INFO Init: - LDD Dictionary_Type is Discipline >>> WARNING Init: - Config.Properties Namespace Id Not Found:TBD_Ingest_LDD >>> WARNING Attribute: <parameter_type> - An attribute with the enumeration_flag = false must not have any permissible values. >>> WARNING Header: - New namespace id has been specified:TBD_Ingest_LDD -- LDDTool Execution Summary -- 3 warning(s) 2 error(s) 0 fatal error(s) >> INFO Exit(1)</pre>
Comments	Results met success criteria.
Date of Testing	2021.06.01
Test Personnel	Richard Chen

Test Case ID	SCMA.7
Description	Improvement LDDTool: Revise the handling of supplying the IM version (alternate version) via command-line
Requirements	PASS im#222: Revise the handling of supplying the IM version (alternate version) via command-line
Success Criteria	Run lddtool normally. Save output files. Run `lddtool -V currentIMVersion` and compare output files.
Test Steps	<ol style="list-style-type: none"> 1. lddtool -pl ccb235liddinput.xml 2. mkdir default; mv PDS4_INSIGHT_1G00* default 3. lddtool -pl -V 1G00 ccb235liddinput.xml #im#222 4. mkdir vers; mv PDS4_INSIGHT_1G00* vers; diff -r default vers; rm -r vers/ 5. lddtool -pl -V 1F00 ccb235liddinput.xml #im#88 6. diff default/*xsd PDS4_INSIGHT_1F*.xsd; diff default/*sch PDS4_INSIGHT_1F*.sch; rm -r default PDS4_INSIGHT*
Test Results	<p>Step 1:</p> <pre>>> INFO LDDTOOL Version: 13.1.0-SNAPSHOT >> INFO IM Version Id: 1.16.0.0 >> INFO IM Namespace Id: pds >> INFO IM Label Version Id: 1.0 >> INFO Date: Wed Jun 02 13:03:53 PDT 2021 >> INFO PARENT_DIR: /Users/rchen/PDS4tools/lddtool >> INFO SCRIPT_DIR: /Users/rchen/PDS4tools/lddtool/bin >> INFO LIB_DIR: /Users/rchen/PDS4tools/lddtool/lib >>> INFO Init: - Config.Properties Namespace Id Using:pds >>> INFO Init: - LDD Dictionary_Type is Mission >>> WARNING Init: - Config.Properties Namespace Id Not Found:insight >>> WARNING Header: - New steward has been specified:geo >>> WARNING Header: - New namespace id has been specified:insight -- LDDTool Execution Summary -- 3 warning(s) 0 error(s) 0 fatal error(s) >> INFO Exit(0)</pre> <p>Step 3:</p> <pre>>> INFO The configured IM Versions are:[1G00, 1F00, 1E00, 1D00, 1C00, 1B10, 1B00] >> INFO The provided IM Version 1G00 is valid >> INFO LDDTOOL Version: 13.1.0-SNAPSHOT >> INFO IM Version Id: 1.16.0.0 >> INFO IM Namespace Id: pds >> INFO IM Label Version Id: 1.0 >> INFO Date: Wed Jun 02 13:05:43 PDT 2021 >> INFO PARENT_DIR: /Users/rchen/PDS4tools/lddtool >> INFO SCRIPT_DIR: /Users/rchen/PDS4tools/lddtool/bin >> INFO LIB_DIR: /Users/rchen/PDS4tools/lddtool/lib >>> INFO Init: - Config.Properties Namespace Id Using:pds >>> INFO Init: - LDD Dictionary_Type is Mission >>> WARNING Init: - Config.Properties Namespace Id Not Found:insight >>> WARNING Header: - New steward has been specified:geo >>> WARNING Header: - New namespace id has been specified:insight -- LDDTool Execution Summary -- 3 warning(s) 0 error(s) 0 fatal error(s) >> INFO Exit(0)</pre> <p>Step 4: differences only in timestamp between specifying current version and default</p> <pre>diff -r default/PDS4_INSIGHT_1G00_1G00.sch vers/PDS4_INSIGHT_1G00_1G00.sch 2c2 < <!-- PDS4 Schematron for Name Space Id:insight Version:1.16.0.0 - Wed Jun 02 13:03:53 PDT 2021 --> --> <!-- PDS4 Schematron for Name Space Id:insight Version:1.16.0.0 - Wed Jun 02 13:05:43 PDT 2021 --></pre>

```

diff -r default/PDS4_INSIGHT_1G00_1G00.txt vers/PDS4_INSIGHT_1G00_1G00.txt
10c10
< Time      Wed Jun 02 13:03:53 PDT 2021
---
> Time      Wed Jun 02 13:05:43 PDT 2021
diff -r default/PDS4_INSIGHT_1G00.xml vers/PDS4_INSIGHT_1G00.xml
2c2
< <!-- PDS4 XML product label for PDS4 V1.16.0.0 Wed Jun 02 13:03:53 PDT 2021 -->
---
> <!-- PDS4 XML product label for PDS4 V1.16.0.0 Wed Jun 02 13:05:43 PDT 2021 -->
29c29
<     <creation_date_time>2021-06-02T13:03:54</creation_date_time>
---
>     <creation_date_time>2021-06-02T13:05:43</creation_date_time>
43c43
<     <creation_date_time>2021-06-02T13:03:54</creation_date_time>
---
>     <creation_date_time>2021-06-02T13:05:43</creation_date_time>
diff -r default/PDS4_INSIGHT_1G00.xsd vers/PDS4_INSIGHT_1G00.xsd
2c2
< <!-- PDS4 XML/Schema for Name Space Id:insight Version:1.16.0.0 - Wed Jun 02 13:03:53 PDT 2021 -->
---
> <!-- PDS4 XML/Schema for Name Space Id:insight Version:1.16.0.0 - Wed Jun 02 13:05:43 PDT 2021 -->

```

Step 5:

```

>> INFO The configured IM Versions are:[1G00, 1F00, 1E00, 1D00, 1C00, 1B10, 1B00]
>> INFO The provided IM Version 1F00 is valid
>> INFO LDDTOOL Version: 13.1.0-SNAPSHOT
>> INFO IM Version Id: 1.15.0.0
>> INFO IM Namespace Id: pds
>> INFO IM Label Version Id: 1.0
>> INFO Date: Wed Jun 02 13:10:32 PDT 2021
>> INFO PARENT_DIR: /Users/rchen/PDS4tools/lddtool
>> INFO SCRIPT_DIR: /Users/rchen/PDS4tools/lddtool/bin
>> INFO LIB_DIR: /Users/rchen/PDS4tools/lddtool/lib
>>> INFO Init: - Config.Properties Namespace Id Using:pds
>>> INFO Init: - LDD Dictionary_Type is Mission
>>> WARNING Init: - Config.Properties Namespace Id Not Found:insight
>>> WARNING Header: - New steward has been specified:geo
>>> WARNING Header: - New namespace id has been specified:insight
-- LDDTool Execution Summary --
    3 warning(s)
    0 error(s)
    0 fatal error(s)
>> INFO Exit(0)

```

Step 6: only versioning differences

```

2,3c2,3
< <!-- PDS4 XML/Schema for Name Space Id:insight Version:1.16.0.0 - Wed Jun 02 13:03:53 PDT 2021 -->
< <!-- Generated from the PDS4 Information Model Version 1.16.0.0 - System Build 11.1 -->
---
> <!-- PDS4 XML/Schema for Name Space Id:insight Version:1.16.0.0 - Wed Jun 02 13:10:32 PDT 2021 -->
> <!-- Generated from the PDS4 Information Model Version 1.15.0.0 - System Build 11a -->
7c7
< <!-- 1.16.0.0 - pds: - Common Dictionary          -->
---
> <!-- 1.15.0.0 - pds: - Common Dictionary          -->
19c19
<   <xsi:import namespace="http://pds.nasa.gov/pds4/pds/v1"
schemaLocation="https://pds.nasa.gov/pds4/pds/v1/PDS4_PDS_1G00.xsd"/>
---
>   <xsi:import namespace="http://pds.nasa.gov/pds4/pds/v1"
schemaLocation="https://pds.nasa.gov/pds4/pds/v1/PDS4_PDS_1F00.xsd"/>
2,3c2,3
< <!-- PDS4 Schematron for Name Space Id:insight Version:1.16.0.0 - Wed Jun 02 13:03:53 PDT 2021 -->
< <!-- Generated from the PDS4 Information Model Version 1.16.0.0 - System Build 11.1 -->
---
> <!-- PDS4 Schematron for Name Space Id:insight Version:1.16.0.0 - Wed Jun 02 13:10:32 PDT 2021 -->

```

	> <!-- Generated from the PDS4 Information Model Version 1.15.0.0 - System Build 11a -->
Comments	Results met success criteria.
Date of Testing	2021.06.02
Test Personnel	Richard Chen

Test Case ID	SCMA.8																																				
Description	Improvement CCB-285: GeoTIFF format as operational PDS4 image																																				
Requirements	PASS im#166: GeoTIFF format as operational PDS4 image																																				
Success Criteria	Find "TIFF 6.0" in PDS4_PDS_*.sch in Header/parsing_standard_id																																				
Test Steps	<ol style="list-style-type: none"> 1. grep parsing_standard_id im166.xml 2. validate -x ./PDS4_PDS_1G00.xsd -S ./PDS4_PDS_1G00.sch -t im166.xml 																																				
Test Results	<p>Step 1:</p> <pre><parsing_standard_id>TIFF 6.0</parsing_standard_id> <!-- RC was FITS 3.0 --> <parsing_standard_id>TIFF 6.0</parsing_standard_id> <!-- RC was FITS 3.0 --></pre> <p>Step 2: standard good message</p> <p>PDS Validate Tool Report</p> <p>Configuration:</p> <table style="margin-left: 40px;"> <tr><td>Version</td><td>2.0.6</td></tr> <tr><td>Date</td><td>2021-06-02T21:28:14Z</td></tr> </table> <p>Parameters:</p> <table style="margin-left: 40px;"> <tr><td>Targets</td><td>[file:/Users/rchen/Desktop/test/testLDD/im166.xml]</td></tr> <tr><td>User Specified Schemas</td><td>[file:/Users/rchen/Desktop/test/PDS4_PDS_1G00.xsd]</td></tr> <tr><td>User Specified Schematrons</td><td>[file:/Users/rchen/Desktop/test/PDS4_PDS_1G00.sch]</td></tr> <tr><td>Severity Level</td><td>WARNING</td></tr> <tr><td>Recurse Directories</td><td>true</td></tr> <tr><td>File Filters Used</td><td>[*.xml, *.XML]</td></tr> <tr><td>Data Content Validation</td><td>on</td></tr> <tr><td>Product Level Validation</td><td>on</td></tr> <tr><td>Max Errors</td><td>100000</td></tr> <tr><td>Registered Contexts File</td><td>/Users/rchen/PDS4tools/validate/resources/registered_context_products.json</td></tr> </table> <p>Product Level Validation Results</p> <table style="margin-left: 40px;"> <tr><td colspan="2">PASS: file:/Users/rchen/Desktop/test/testLDD/im166.xml</td></tr> <tr><td colspan="2"> 1 product validation(s) completed</td></tr> </table> <p>Summary:</p> <table style="margin-left: 40px;"> <tr><td>0 error(s)</td></tr> <tr><td>0 warning(s)</td></tr> </table> <p>Product Validation Summary:</p> <table style="margin-left: 40px;"> <tr><td>1 product(s) passed</td></tr> <tr><td>0 product(s) failed</td></tr> <tr><td>0 product(s) skipped</td></tr> </table> <p>Referential Integrity Check Summary:</p> <table style="margin-left: 40px;"> <tr><td>0 check(s) passed</td></tr> <tr><td>0 check(s) failed</td></tr> <tr><td>0 check(s) skipped</td></tr> </table> <p>End of Report</p> <p>Completed execution in 4049 ms</p>	Version	2.0.6	Date	2021-06-02T21:28:14Z	Targets	[file:/Users/rchen/Desktop/test/testLDD/im166.xml]	User Specified Schemas	[file:/Users/rchen/Desktop/test/PDS4_PDS_1G00.xsd]	User Specified Schematrons	[file:/Users/rchen/Desktop/test/PDS4_PDS_1G00.sch]	Severity Level	WARNING	Recurse Directories	true	File Filters Used	[*.xml, *.XML]	Data Content Validation	on	Product Level Validation	on	Max Errors	100000	Registered Contexts File	/Users/rchen/PDS4tools/validate/resources/registered_context_products.json	PASS: file:/Users/rchen/Desktop/test/testLDD/im166.xml		1 product validation(s) completed		0 error(s)	0 warning(s)	1 product(s) passed	0 product(s) failed	0 product(s) skipped	0 check(s) passed	0 check(s) failed	0 check(s) skipped
Version	2.0.6																																				
Date	2021-06-02T21:28:14Z																																				
Targets	[file:/Users/rchen/Desktop/test/testLDD/im166.xml]																																				
User Specified Schemas	[file:/Users/rchen/Desktop/test/PDS4_PDS_1G00.xsd]																																				
User Specified Schematrons	[file:/Users/rchen/Desktop/test/PDS4_PDS_1G00.sch]																																				
Severity Level	WARNING																																				
Recurse Directories	true																																				
File Filters Used	[*.xml, *.XML]																																				
Data Content Validation	on																																				
Product Level Validation	on																																				
Max Errors	100000																																				
Registered Contexts File	/Users/rchen/PDS4tools/validate/resources/registered_context_products.json																																				
PASS: file:/Users/rchen/Desktop/test/testLDD/im166.xml																																					
1 product validation(s) completed																																					
0 error(s)																																					
0 warning(s)																																					
1 product(s) passed																																					
0 product(s) failed																																					
0 product(s) skipped																																					
0 check(s) passed																																					
0 check(s) failed																																					
0 check(s) skipped																																					
Comments	Results met success criteria.																																				
Date of Testing	2021.06.02																																				
Test Personnel	Richard Chen																																				

Test Case ID	SCMA.9
Description	Improvement LDDTool: requires one class with (element_flag = true) even when no classes defined
Requirements	PASS im#188: requires one class with (element_flag = true) even when no classes defined
Success Criteria	Create lddinput with no classes, only rules. Lddtool is supposed to allow this, I think.
Test Steps	<ol style="list-style-type: none"> 1. grep element_flag im188liddinput.xml #im#188 2. lddtool -pl im188liddinput.xml 3. diff im188a.xml im188b.xml 4. validate -x ./PDS4_PDS_1G00.xsd PDS4_TEST_1G00_1G00.xsd -S ./PDS4_PDS_1G00.sch PDS4_TEST_1G00_1G00.sch -t im188a.xml 5. validate -x ./PDS4_PDS_1G00.xsd PDS4_TEST_1G00_1G00.xsd -S ./PDS4_PDS_1G00.sch PDS4_TEST_1G00_1G00.sch -t im188b.xml
Test Results	<p>Step 1: not found, as intended. Ingest_LDD formerly needed this</p> <p>Step 2:</p> <pre>>> INFO LDDTOOL Version: 13.1.0-SNAPSHOT >> INFO IM Version Id: 1.16.0.0 >> INFO IM Namespace Id: pds >> INFO IM Label Version Id: 1.0 >> INFO Date: Wed Jun 02 20:27:44 PDT 2021 >> INFO PARENT_DIR: /Users/rchen/PDS4tools/lddtool >> INFO SCRIPT_DIR: /Users/rchen/PDS4tools/lddtool/bin >> INFO LIB_DIR: /Users/rchen/PDS4tools/lddtool/lib >>> INFO Init: - Config.Properties Namespace Id Using:pds >>> INFO Init: - LDD Dictionary_Type is Mission >>> WARNING Init: - Config.Properties Namespace Id Not Found:test >>> WARNING Header: - New steward has been specified:en >>> WARNING Header: - New namespace id has been specified:test -- LDDTool Execution Summary -- 3 warning(s) 0 error(s) 0 fatal error(s) >> INFO Exit(0)</pre> <p>Step 3:</p> <pre>43c43 < <name>testme</name> --- > <name>InSight</name> <!-- im188 LDD requires "testme" --></pre> <p>Step 4: standard good message</p> <p>Step 5: error caught by LDD's rule</p> <pre>PDS Validate Tool Report Configuration: Version 2.0.6 Date 2021-06-03T03:29:18Z Parameters: Targets [file:/Users/rchen/Desktop/test/testLDD/im188b.xml] User Specified Schemas [file:/Users/rchen/Desktop/test/PDS4_PDS_1G00.xsd, file:/Users/rchen/Desktop/test/testLDD/PDS4_TEST_1G00_1G00.xsd] User Specified Schematrons [file:/Users/rchen/Desktop/test/PDS4_PDS_1G00.sch, file:/Users/rchen/Desktop/test/testLDD/PDS4_TEST_1G00_1G00.sch] Severity Level WARNING Recurse Directories true File Filters Used [*.*xml, *.XML] Data Content Validation on Product Level Validation on Max Errors 100000 Registered Contexts File /Users/rchen/PDS4tools/validate/resources/registered_context_products.json Product Level Validation Results</pre>

	<pre> FAIL: file:/Users/rchen/Desktop/test/testLDD/im188b.xml ERROR [error.label.schematron] line 42, 29: The attribute Investigation_Area/name must be equal to 'testme'. 1 product validation(s) completed Summary: 1 error(s) 0 warning(s) Product Validation Summary: 0 product(s) passed 1 product(s) failed 0 product(s) skipped Referential Integrity Check Summary: 0 check(s) passed 0 check(s) failed 0 check(s) skipped Message Types: 1 error.label.schematron End of Report Completed execution in 3209 ms </pre>
Comments	Results met success criteria.
Date of Testing	2021.06.02
Test Personnel	Richard Chen

Test Case ID	SCMA.10
Description	Defect LDDtool combining two consecutive choice blocks into one block
Requirements	PASS im#192: combining two consecutive choice blocks into one block
Success Criteria	Download Ed's two attachments to the issue and see if running lddtool on the input avoids the problem in the output. Maybe create a second test.
Test Steps	<ol style="list-style-type: none"> 1. downloaded ingest-PDS4_Geom_1D00_1720.xml.txt 2. lddtool -pl ingest-PDS4_Geom_1D00_1720.xml <p>compare with PDS4_Geom_1E00_1720.xsd provided with new version PDS4_Geom_1F00_1720.xsd</p>
Test Results	<p>Step 3. No change</p> <p>Old:</p> <pre> <xs:sequence> <xs:element ref="pds:local_identifier" minOccurs="0" maxOccurs="unbounded"> </xs:element> <xs:element name="device_id" type="geom:device_id" minOccurs="0" maxOccurs="1"> </xs:element> <xs:element name="device_name" type="geom:device_name" minOccurs="1" maxOccurs="1"> </xs:element> <xs:element name="device_mode" type="geom:device_mode" minOccurs="0" maxOccurs="1"> </xs:element> <xs:element name="device_phase" type="geom:device_phase" minOccurs="0" maxOccurs="1"> </xs:element> <xs:element name="selected_instrument_id" type="geom:selected_instrument_id" minOccurs="0" maxOccurs="1"> </xs:element> <xs:choice minOccurs="1" maxOccurs="unbounded"> <xs:element name="Device_Angle" type="geom:Device_Angle"> </xs:element> <xs:element name="Device_Component_State" type="geom:Device_Component_State"> </xs:element> </pre>

```

<xs:element name="Device_Motor_Counts" type="geom:Device_Motor_Counts">
</xs:element>
<xs:element name="Vector_Device_Gravity"
type="geom:Vector_Device_Gravity"> </xs:element>
<xs:element name="Device_Temperature" type="geom:Device_Temperature">
</xs:element>
<xs:element name="Coordinate_Space_Present"
type="geom:Coordinate_Space_Present"> </xs:element>
<xs:element ref="geom:Coordinate_Space_Reference"> </xs:element>
</xs:choice>
</xs:sequence>
</xs:complexType>

New:
<xs:sequence>
<xs:element ref="pds:local_identifier" minOccurs="0" maxOccurs="unbounded">
</xs:element>
<xs:element name="device_id" type="geom:device_id" minOccurs="0"
maxOccurs="1"> </xs:element>
<xs:element name="device_name" type="geom:device_name" minOccurs="1"
maxOccurs="1"> </xs:element>
<xs:element name="device_mode" type="geom:device_mode" minOccurs="0"
maxOccurs="1"> </xs:element>
<xs:element name="device_phase" type="geom:device_phase" minOccurs="0"
maxOccurs="1"> </xs:element>
<xs:element name="selected_instrument_id" type="geom:selected_instrument_id"
minOccurs="0" maxOccurs="1"> </xs:element>
<xs:choice minOccurs="1" maxOccurs="unbounded">
<xs:element name="Device_Angle" type="geom:Device_Angle"> </xs:element>
<xs:element name="Device_Component_State"
type="geom:Device_Component_State"> </xs:element>
<xs:element name="Device_Motor_Counts" type="geom:Device_Motor_Counts">
</xs:element>
<xs:element name="Vector_Device_Gravity"
type="geom:Vector_Device_Gravity"> </xs:element>
<xs:element name="Device_Temperature" type="geom:Device_Temperature">
</xs:element>
<xs:element name="Coordinate_Space_Present"
type="geom:Coordinate_Space_Present"> </xs:element>
<xs:element ref="geom:Coordinate_Space_Reference"> </xs:element>
</xs:choice>
</xs:sequence>
</xs:complexType>
```

Comments	Results met success criteria.
Date of Testing	2021.06.02
Test Personnel	Richard Chen

Test Case ID	SCMA.11
Description	Defect LDDTool: erroneously replaces TBD values with null in JSON output
Requirements	PASS pds4-information-model#227: erroneously replaces TBD values with null in JSON output
Success Criteria	Create an lddtool input with "TBD" in various fields of DD_Attribute and see if the output preserves "TBD", as lddtool should do.
Test Steps	<ol style="list-style-type: none"> 1. Change definition fields in im180lldinput.xml to 'TBD' 2. lddtool -plJ im180lldinput.xml grep -nw PDS4 GEOMETRY 1F00 1E00.JSON -e '_TBD'
Test Results	<p>Step 3.</p> <pre>52: "description": "_TBD", 77: "description": "_TBD", 102: "description": " TBD",</pre>
Comments	Results met success criteria.
Date of Testing	2021.06.02
Test Personnel	Richard Chen

Test Case ID	SCMA.12
Description	Defect LDDTool: uses wrong version of XSD when referencing IMG dictionary
Requirements	PASS pds4-information-model#229: uses wrong version of XSD when referencing IMG dictionary
Success Criteria	Download the attachments, run lddtool, check if output ldd references the correct .xsd.
Test Steps	<ol style="list-style-type: none"> 1. lddtool -lp PDS4_IMG_IngestLDD.xml PDS4_MARS2020_IngestLDD.xml 2. Verify .xsd file reference the correct version.
Test Results	<p>Step 2.</p> <pre><xs:import namespace="http://pds.nasa.gov/pds4/pds/v1" schemaLocation="https://pds.nasa.gov/pds4/pds/v1/PDS4_PDS_1F00.xsd"/> <xs:import namespace="http://pds.nasa.gov/pds4/img/v1" schemaLocation="https://pds.nasa.gov/pds4/img/v1/PDS4_IMG_1F00_1810.xsd"/></pre>
Comments	Results met success criteria.
Date of Testing	2021.06.02
Test Personnel	Gary Chen

Test Case ID	SCMA.13
Description	Defect LDDTool: Version info bug introduced since v11.2.0
Requirements	PASS pds4-information-model#168: Version info bug introduced since v11.2.0
Success Criteria	'lddtool -version' gives the right version (was 0.0 in one build)
Test Steps	<ol style="list-style-type: none"> 1. Lddtool -v 2. Verify version is not 0.0.0.
Test Results	Step 2.

	LDDTool Version: 12.0.0 Built with IM Version: 1.15.0.0 Build Date: 2020-10-12 13:13:47 Configured IM Versions: [1F00, 1E00, 1D00, 1C00, 1B10, 1B00]
Comments	Results met success criteria.
Date of Testing	2021.06.02
Test Personnel	Richard Chen

Test Case ID	SCMA.14
Description	Defect LDDTool: update LDD attribute checking to only check for "type" and "_type"
Requirements	PASS pds4-information-model#230: LDD attribute checks only for "type" and "_type"
Success Criteria	Create an attribute xxxtype without permissible values. Lddtool should not complain. If changed to xxx_type, lddtool should complain
Test Steps	1. lddtool -lp \$(pwd)/PDS4_CTLI_IngestLDD.xml
Test Results	<p>Step 1. No error</p> <pre>>> INFO LDDTOOL Version: 12.0.0 >> INFO IM Version Id: 1.15.0.0 >> INFO IM Namespace Id: pds >> INFO IM Label Version Id: 1.21 >> INFO Date: Mon Nov 23 21:46:04 PST 2020 >> INFO PARENT_DIR: /home/gxchen/pds-test/lddtool >> INFO SCRIPT_DIR: /home/gxchen/pds-test/lddtool/bin >> INFO LIB_DIR: /home/gxchen/pds-test/lddtool/lib >>> INFO Init: - Config.Properties Namespace Id Using:pds >>> INFO Init: - LDD Dictionary_Type is Discipline >>> INFO Attribute: <type> - The default minimum characters provided by the attribute's data type is being overridden with 1 >>> INFO Attribute: <type> - The default maximum characters provided by the attribute's data type is being overridden with 255 >>> INFO Attribute: <type> - This local attribute has a duplicate in the PDS4 data dictionary. >>> INFO Attribute: <type> - This local attribute has a duplicate in the PDS4 data dictionary. >>> INFO Attribute: <type> - This local attribute has a duplicate in the PDS4 data dictionary. >>> INFO Attribute: <type> - This local attribute has a duplicate in the PDS4 data dictionary. >>> INFO Attribute: <type> - This local attribute has a duplicate in the PDS4 data dictionary. >>> INFO Attribute: <type> - This local attribute has a duplicate in the PDS4 data dictionary.</pre>

	<pre>>>> INFO Attribute: <subtype> - This local attribute has a duplicate in the PDS4 data dictionary. >>> WARNING Init: - Config.Properties Namespace Id Not Found:ctli >>> WARNING Header: - New steward has been specified:ctli >>> WARNING Header: - New namespace id has been specified:ctli -- LDDTool Execution Summary -- 3 warning(s) 0 error(s) 0 fatal error(s) >> INFO Exit(0)</pre>
Comments	Results met success criteria.
Date of Testing	2021.06.02
Test Personnel	Richard Chen

Test Case ID	SCMA.15
Description	Improvement LDDTool: Use sch:value-of to display a variable in Schematron validation
Requirements	PASS pds4-information-model#167: Use sch:value-of to display a variable in Schematron validation
Success Criteria	Validate hits the sch:value-of rule
Test Steps	<ol style="list-style-type: none"> 1. cd /Users/rchen/Desktop/test/testLDD 2. lddtool -pl im167liddinput.xml 3. grep "value-of" im167liddinput.xml #rule: 2 colons in mission_phase_name 4. diff im167a.xml im167b.xml 5. validate -x ../PDS4_PDS_1G00.xsd PDS4_MSN_1G00_1G00.xsd -S ../PDS4_PDS_1G00.sch PDS4_MSN_1G00_1G00.sch -t im167a.xml 6. validate -x ../PDS4_PDS_1g00.xsd PDS4_MSN_1G00_1G00.xsd -S ../PDS4_PDS_1G00.sch PDS4_MSN_1G00_1G00.sch -t im167b.xml 7. rm PDS4_MSN_1G00_1G00.*
Test Results	<p>Step 2:</p> <pre>>> INFO LDDTOOL Version: 13.1.0-SNAPSHOT >> INFO IM Version Id: 1.16.0.0 >> INFO IM Namespace Id: pds >> INFO IM Label Version Id: 1.0 >> INFO Date: Wed Jun 02 21:34:18 PDT 2021 >> INFO PARENT_DIR: /Users/rchen/PDS4tools/lddtool/bin >> INFO SCRIPT_DIR: /Users/rchen/PDS4tools/lddtool/lib >> INFO LIB_DIR: /Users/rchen/PDS4tools/lddtool/lib >>> INFO Init: - Config.Properties Namespace Id Found:msn >>> INFO Init: - Config.Properties Namespace Id Using:msn >>> INFO Init: - LDD Dictionary_Type is Mission >>> INFO Attribute: <mission_phase_name> - The default minimum characters provided by the attribute's data type is being overridden with 1 >>> INFO Attribute: <mission_phase_name> - The default maximum characters provided by the attribute's data type is being overridden with 255 >>> INFO Attribute: <mission_phase_identifier> - The default minimum characters provided by the attribute's data type is being overridden with 1 >>> INFO Attribute: <mission_phase_identifier> - The default maximum characters provided by the attribute's data type is being overridden with 255 >>> INFO Attribute: <start_orbit_number> - The default minimum characters provided by the attribute's data type is being overridden with 1 >>> INFO Attribute: <start_orbit_number> - The default maximum characters provided by the attribute's data type is being overridden with 255</pre>

	<pre>>>> INFO Attribute: <stop_orbit_number> - The default minimum characters provided by the attribute's data type is being overridden with 1 >>> INFO Attribute: <stop_orbit_number> - The default maximum characters provided by the attribute's data type is being overridden with 255 >>> INFO Attribute: <spacecraft_clock_start_count> - The default minimum characters provided by the attribute's data type is being overridden with 1 >>> INFO Attribute: <spacecraft_clock_start_count> - The default maximum characters provided by the attribute's data type is being overridden with 255 >>> INFO Attribute: <spacecraft_clock_stop_count> - The default minimum characters provided by the attribute's data type is being overridden with 1 >>> INFO Attribute: <spacecraft_clock_stop_count> - The default maximum characters provided by the attribute's data type is being overridden with 255 -- LDDTool Execution Summary -- 0 warning(s) 0 error(s) 0 fatal error(s) >> INFO Exit(0)</pre> <p>Step 3:</p> <pre><rule_message>msn:mission_phase_name demands &lt;sch:value-of select="\$required_colons"/&gt; colons for no good reason. Found &lt;sch:value-of select="\$num_colons"/&gt;;</rule_message></pre> <p>Step 4:</p> <pre>59c59 < <msn:mission_phase_name>Commissioning::Phase</msn:mission_phase_name> --- > <msn:mission_phase_name>Commissioning Phase</msn:mission_phase_name></pre> <p>Step 5: standard good validation message because mission_phase_name has 2 colons</p> <p>Step 6: sch:value-of... in Ingest_LDD got replaced by 2 and 0</p> <pre>PDS Validate Tool Report Configuration: Version 2.0.6 Date 2021-06-03T04:35:53Z Parameters: Targets [file:/Users/rchen/Desktop/test/testLDD/im167b.xml] User Specified Schemas [file:/Users/rchen/Desktop/test/PDS4_PDS_1G00.xsd, file:/Users/rchen/Desktop/test/testLDD/PDS4_MSN_1G00_1G00.xsd] User Specified Schematrons [file:/Users/rchen/Desktop/test/PDS4_PDS_1G00.sch, file:/Users/rchen/Desktop/test/testLDD/PDS4_MSN_1G00_1G00.sch] Severity Level WARNING Recurse Directories true File Filters Used [*.xml, *.XML] Data Content Validation on Product Level Validation on Max Errors 100000 Registered Contexts File /Users/rchen/PDS4tools/validate/resources/registered_context_products.json Product Level Validation Results FAIL: file:/Users/rchen/Desktop/test/testLDD/im167b.xml ERROR [error.label.schematron] line 59, 41: msn:mission_phase_name demands 2 colons for no good reason. Found 0. 1 product validation(s) completed Summary: 1 error(s) 0 warning(s) Product Validation Summary: 0 product(s) passed 1 product(s) failed 0 product(s) skipped Referential Integrity Check Summary: 0 check(s) passed 0 check(s) failed 0 check(s) skipped Message Types: 1 error.label.schematron End of Report Completed execution in 3099 ms</pre>
Comments	Results met success criteria.

Date of Testing	2021.06.02
Test Personnel	Richard Chen

Test Case ID	SCMA.16
Description	DocBook generation does not work from any file system location
Requirements	PASS im#170: DocBook generation does not work from any file system location
Success Criteria	From a random directory, generate docbook
Test Steps	<ol style="list-style-type: none"> 1. cd /tmp; mkdir export 2. lddtool -pID /Users/rchen/Desktop/test/testLDD/im167lddinput.xml 3. ls -l export/DD/ 4. rm -r PDS4 MSN * export
Test Results	<p>Step 2:</p> <pre>>> INFO LDDTOOL Version: 13.1.0-SNAPSHOT >> INFO IM Version Id: 1.16.0.0 >> INFO IM Namespace Id: pds >> INFO IM Label Version Id: 1.0 >> INFO Date: Wed Jun 02 21:50:56 PDT 2021 >> INFO PARENT_DIR: /Users/rchen/PDS4tools/lddtool >> INFO SCRIPT_DIR: /Users/rchen/PDS4tools/lddtool/bin >> INFO LIB_DIR: /Users/rchen/PDS4tools/lddtool/lib >>> INFO Init: - Config.Properties Namespace Id Found:msn >>> INFO Init: - Config.Properties Namespace Id Using:msn >>> INFO Init: - LDD Dictionary_Type is Mission >>> INFO Attribute: <mission_phase_name> - The default minimum characters provided by the attribute's data type is being overridden with 1 >>> INFO Attribute: <mission_phase_name> - The default maximum characters provided by the attribute's data type is being overridden with 255 >>> INFO Attribute: <mission_phase_identifier> - The default minimum characters provided by the attribute's data type is being overridden with 1 >>> INFO Attribute: <mission_phase_identifier> - The default maximum characters provided by the attribute's data type is being overridden with 255 >>> INFO Attribute: <start_orbit_number> - The default minimum characters provided by the attribute's data type is being overridden with 1 >>> INFO Attribute: <start_orbit_number> - The default maximum characters provided by the attribute's data type is being overridden with 255 >>> INFO Attribute: <stop_orbit_number> - The default minimum characters provided by the attribute's data type is being overridden with 1 >>> INFO Attribute: <stop_orbit_number> - The default maximum characters provided by the attribute's data type is being overridden with 255 >>> INFO Attribute: <spacecraft_clock_start_count> - The default minimum characters provided by the attribute's data type is being overridden with 1 >>> INFO Attribute: <spacecraft_clock_start_count> - The default maximum characters provided by the attribute's data type is being overridden with 255 >>> INFO Attribute: <spacecraft_clock_stop_count> - The default minimum characters provided by the attribute's data type is being overridden with 1 >>> INFO Attribute: <spacecraft_clock_stop_count> - The default maximum characters provided by the attribute's data type is being overridden with 255 -- LDDTool Execution Summary -- 0 warning(s) 0 error(s) 0 fatal error(s) >> INFO Exit(0)</pre> <p>Step 3:</p> <pre>total 9056 -rw-rw-r-- 1 rchen wheel 4636231 Jun 2 21:50 PDS4_PDS_DD_1G00.xml</pre>
Comments	Results met success criteria.
Date of Testing	2021.06.02
Test Personnel	Richard Chen

Test Case ID	SCMA.17
Description	Throw WARNING when enumeration_flag = false but enumerations are specified
Requirements	PASS im#266: Throw WARNING message when enumeration_flag = false but enumerations are specified
Success Criteria	Check for desired warning. Also check that output dictionary does not enumerate
Test Steps	<ol style="list-style-type: none"> 1. cd /Users/rchen/Desktop/test/testLDD 2. diff im266liddinputa.xml im266liddinputb.xml 3. lddtool -pl im266liddinputa.xml; mkdir xa; mv PDS4_MSN* xa/ 4. lddtool -pl im266liddinputb.xml; mkdir xb; mv PDS4_MSN* xb/ #im#266 5. diff -r xa xb; rm -r xa xb
Test Results	<p>Step 2:</p> <pre> 28c28 < <enumeration_flag>true</enumeration_flag> --- > <enumeration_flag>false</enumeration_flag> <!-- so DD_Permissible_Value is illogical --> </pre> <p>Step 3:</p> <pre> >> INFO LDDTOOL Version: 13.1.0-SNAPSHOT >> INFO IM Version Id: 1.16.0.0 >> INFO IM Namespace Id: pds >> INFO IM Label Version Id: 1.0 >> INFO Date: Wed Jun 02 23:00:28 PDT 2021 >> INFO PARENT_DIR: /Users/rchen/PDS4tools/lddtool >> INFO SCRIPT_DIR: /Users/rchen/PDS4tools/lddtool/bin >> INFO LIB_DIR: /Users/rchen/PDS4tools/lddtool/lib >>> INFO Init: - Config.Properties Namespace Id Found:msn >>> INFO Init: - Config.Properties Namespace Id Using:msn >>> INFO Init: - LDD Dictionary_Type is Mission >>> WARNING Header: - New steward has been specified:geo -- LDDTool Execution Summary -- 1 warning(s) 0 error(s) 0 fatal error(s) >> INFO Exit(0) </pre> <p>Step 4:</p> <pre> >> INFO LDDTOOL Version: 13.1.0-SNAPSHOT >> INFO IM Version Id: 1.16.0.0 >> INFO IM Namespace Id: pds >> INFO IM Label Version Id: 1.0 >> INFO Date: Wed Jun 02 23:00:56 PDT 2021 >> INFO PARENT_DIR: /Users/rchen/PDS4tools/lddtool >> INFO SCRIPT_DIR: /Users/rchen/PDS4tools/lddtool/bin >> INFO LIB_DIR: /Users/rchen/PDS4tools/lddtool/lib >>> INFO Init: - Config.Properties Namespace Id Found:msn >>> INFO Init: - Config.Properties Namespace Id Using:msn >>> INFO Init: - LDD Dictionary_Type is Mission >>> WARNING Attribute: <mission_phase_name_type> - An attribute with the enumeration_flag = false must not have any permissible values. >>> WARNING Header: - New steward has been specified:geo -- LDDTool Execution Summary -- 2 warning(s) 0 error(s) 0 fatal error(s) >> INFO Exit(0) </pre> <p>Step 5: ignoring diffs in creation times and file names</p> <pre> diff -r xa/PDS4_MSN_1G00_1G00.sch xb/PDS4_MSN_1G00_1G00.sch 21,27d20 < <sch:pattern> < <sch:rule context="msn:XXNAIFObservation_Information/msn:mission_phase_name_type"> < <sch:assert test=". = ('ATLO', 'CRUISE')"> < <title>msn:XXNAIFObservation_Information/msn:mission_phase_name_type/msn:mission_phase_name_type</titl e> </pre>

	<pre>< The attribute msn:mission_phase_name_type must be equal to one of the following values 'ATLO', 'CRUISE'.</sch:assert> < </sch:rule> < </sch:pattern></pre>
Comments	Results met success criteria.
Date of Testing	2021.06.02
Test Personnel	Richard Chen

Test Case ID	SCMA.18
Description	Various issues with PSA dictionaries
Requirements	<p>PASS im#301: LDDTool does not generate the correct namespace for PSA dictionaries</p> <p>PASS im#302: LDDTool does not allow the bundle to be specified for generated dictionaries</p> <p>PASS im#304: LDDTool does include the PSA namespace</p>
Success Criteria	Run lddtool on a PSA IngestLDD; check output namespace, LID
Test Steps	<ol style="list-style-type: none"> 1. cd /Users/rchen/Desktop/test/testLDD 2. lddtool -dpl im301liddinputbc.xml #unadvertised -d excludes “mission/” in namespace 3. grep bc/v1 PDS4_BC_* #im#301 im#304 4. grep logical_identifier PDS4_BC_1G00_1G00.xml #im#302 5. lddtool -dpl im301liddinputpsa.xml 6. grep psa/v1 PDS4_PSA_* #im#301 im#304 7. grep logical_identifier PDS4_PSA_1G00_1G00.xml #im#302 8. grep psa_master /Users/rchen/PDS4tools/lddtool/Data/config.properties 9. rm PDS4 *
Test Results	<p>Step 2:</p> <pre>>> INFO LDDTOOL Version: 13.1.0-SNAPSHOT >> INFO IM Version Id: 1.16.0.0 >> INFO IM Namespace Id: pds >> INFO IM Label Version Id: 1.0 >> INFO Date: Mon Jun 07 23:09:37 PDT 2021 >> INFO PARENT_DIR: /Users/rchen/PDS4tools/lddtool >> INFO SCRIPT_DIR: /Users/rchen/PDS4tools/lddtool/bin >> INFO LIB_DIR: /Users/rchen/PDS4tools/lddtool/lib >>> INFO Init: - Config.Properties Namespace Id Found:bc >>> INFO Init: - Config.Properties Namespace Id Using:bc >>> INFO Init: - LDD Dictionary_Type is Mission >>> WARNING Header: - New steward has been specified:psa >>> WARNING Header: - New namespace id has been specified:bc -- LDDTool Execution Summary -- 2 warning(s) 0 error(s) 0 fatal error(s) >> INFO Exit(0)</pre> <p>Step 3: Good: the ns align and have psa.esa.int</p> <pre>PDS4_BC_1G00_1G00.sch: <sch:ns uri="http://psa.esa.int/psa/bc/v1" prefix="bc"/> PDS4_BC_1G00_1G00.xsd: targetNamespace="http://psa.esa.int/psa/bc/v1" PDS4_BC_1G00_1G00.xsd: xmlns:bc="http://psa.esa.int/psa/bc/v1"</pre> <p>Step 4: IM#302 wants LID urn:esa:psa:bc:...</p> <pre><logical_identifier>urn:esa:psa:bc:xml_schema:bc-xml_schema_1.16.0.0_1.16.0.0</logical_identifier></pre> <p>Step 5:</p> <pre>>> INFO LDDTOOL Version: 13.1.0-SNAPSHOT >> INFO IM Version Id: 1.16.0.0 >> INFO IM Namespace Id: pds >> INFO IM Label Version Id: 1.0 >> INFO Date: Mon Jun 07 23:13:01 PDT 2021 >> INFO PARENT_DIR: /Users/rchen/PDS4tools/lddtool >> INFO SCRIPT_DIR: /Users/rchen/PDS4tools/lddtool/bin >> INFO LIB_DIR: /Users/rchen/PDS4tools/lddtool/lib >>> INFO Init: - Config.Properties Namespace Id Found:psa</pre>

Test Case ID	SCMA.19
Description	Various issues generating LDDs for older versions
Requirements	<p>PASS im#316 The 1F00 directory is missing from the Data directory for the 1G00 development release</p> <p>PASS im#322 LDDTool generates a 1C00 file when -V1B00 is specified</p> <p>PASS im#328 LDDTool outputs invalid schema with v13.0.0</p>
Success Criteria	Check for 1F00/, generate 1B00 LDD, generate 1D00 LDD
Test Steps	<ol style="list-style-type: none"> 1. cd /Users/rchen/Desktop/test/testLDD

	<ol style="list-style-type: none"> 2. ls -l /Users/rchen/PDS4tools/lddtool/Data/1F00 #im#316 3. lddtool -pl -V 1B00 im322lddinput.xml #im#322 4. ls -tl head -6; grep PDS4_PDS_GEOMETRY_*.xsd 5. lddtool -pl im328lddinput.xml #im#328 6. grep "targetNamespace\ xs:import" PDS4_IMG_1G00_1840.xsd 7. rm PDS4 *
Test Results	<p>Step 2: This will change based upon what the developers do</p> <pre>total 9184 -rwxrwxrwx@ 1 rchen JPL\Domain Users 81832 May 20 08:08 DMDocument.pins -rwxrwxrwx@ 1 rchen JPL\Domain Users 20558 May 20 08:08 Glossary.pins -rwxrwxrwx@ 1 rchen JPL\Domain Users 82180 May 20 08:08 MDPTNConfigClassDisp.xml -rwxrwxrwx@ 1 rchen JPL\Domain Users 161746 May 20 08:08 UpperModel.pins -rwxrwxrwx@ 1 rchen JPL\Domain Users 655479 May 20 08:08 UpperModel.pont -rwxrwxrwx@ 1 rchen JPL\Domain Users 33243 May 20 08:08 config.properties -rwxrwxrwx@ 1 rchen JPL\Domain Users 3602499 May 20 08:08 dd11179.pins -rwxrwxrwx@ 1 rchen JPL\Domain Users 41027 May 20 08:08 pds-namespace-registry.xlsx</pre> <p>Step 3:</p> <pre>>> INFO LDDTOOL Version: 13.1.0-SNAPSHOT >> INFO IM Version Id: 1.16.0.0 >> INFO IM Namespace Id: pds >> INFO IM Label Version Id: 1.0 >> INFO Date: Thu Jun 03 17:41:33 PDT 2021 >> INFO PARENT_DIR: /Users/rchen/PDS4tools/lddtool >> INFO SCRIPT_DIR: /Users/rchen/PDS4tools/lddtool/bin >> INFO LIB_DIR: /Users/rchen/PDS4tools/lddtool/lib >>> INFO Init: - Config.Properties Namespace Id Using:pds >>> INFO Init: - LDD Dictionary_Type is Discipline >>> WARNING Init: - Config.Properties Namespace Id Not Found:geometry >>> WARNING Header: - New steward has been specified:geo >>> WARNING Header: - New namespace id has been specified:geometry -- LDDTool Execution Summary -- 3 warning(s) 0 error(s) 0 fatal error(s) >> INFO Exit(0)</pre> <p>Step 4: good: files named _1B00_1G00.* , and schema = .../PDS4_PDS_1B00.xsd</p> <pre>total 1744 -rw-rw-r-- 1 rchen JPL\Domain Users 2804 Jun 3 23:03 PDS4_GEOMETRY_1B00_1G00.xml -rw-rw-r-- 1 rchen JPL\Domain Users 1171 Jun 3 23:03 PDS4_GEOMETRY_1B00_1G00.sch -rw-rw-r-- 1 rchen JPL\Domain Users 3556 Jun 3 23:03 PDS4_GEOMETRY_1B00_1G00.xsd -rw-rw-r-- 1 rchen JPL\Domain Users 1502 Jun 3 23:03 PDS4_GEOMETRY_1B00_1G00.csv -rw-rw-r-- 1 rchen JPL\Domain Users 2848 Jun 3 23:03 PDS4_GEOMETRY_1B00_1G00.txt <xs:import namespace="http://pds.nasa.gov/pds4/pds/v1" schemaLocation="https://pds.nasa.gov/pds4/pds/v1/PDS4_PDS_1B00.xsd"/></pre> <p>Step 6: targetNamespace's value used to show up as xs:import's attribute, which is bad</p> <pre>targetNamespace="http://pds.nasa.gov/pds4/img/v1" <xs:import namespace="http://pds.nasa.gov/pds4/pds/v1" schemaLocation="https://pds.nasa.gov/pds4/pds/v1/PDS4_PDS_1G00.xsd"/></pre>
Comments	Results met success criteria.
Date of Testing	2021.06.03
Test Personnel	Richard Chen

Test Case ID	SCMA.20
Description	Inherit a class/attribute defined using DD_Associate_External_Class
Requirements	PASS im#324: An LDD developer desires to inherit a class/attribute defined using DD_Associate_External_Class PASS im#331: Invalid output schema when trying to set an Internal Reference reference_type value set
Success Criteria	Generate a working schema from LDDinput that inherits as described

Test Steps	<ol style="list-style-type: none"> 1. cd /Users/rchen/Desktop/test/testLDD 2. lddtool -pl im324lddinput.xml # im#324 im#331 3. diff im324a.xml im324b.xml 4. validate -x ./PDS4_PDS_1G00.xsd PDS4_TEST_1G00_1G00.xsd -S ./PDS4_PDS_1G00.sch PDS4_TEST_1G00_1G00.sch -t im324a.xml 5. validate -x ./PDS4_PDS_1G00.xsd PDS4_TEST_1G00_1G00.xsd -S ./PDS4_PDS_1G00.sch PDS4_TEST_1G00_1G00.sch -t im324b.xml 6. rm PDS4 TEST *
Test Results	<p>Step 2:</p> <pre>>> INFO LDDTOOL Version: 13.1.0-SNAPSHOT >> INFO IM Version Id: 1.16.0.0 >> INFO IM Namespace Id: pds >> INFO IM Label Version Id: 1.0 >> INFO Date: Sat Jun 05 00:28:14 PDT 2021 >> INFO PARENT_DIR: /Users/rchen/PDS4tools/lddtool >> INFO SCRIPT_DIR: /Users/rchen/PDS4tools/lddtool/bin >> INFO LIB_DIR: /Users/rchen/PDS4tools/lddtool/lib >> WARNING get class using attribute value array - lAttr.identifier:0001_NASA_PDS_1.test.Measurement_Instrument.test.Measurement_Instrument_Internal_Reference - using first found - lClassMember.identifier:0001_NASA_PDS_1.test.Measurement_Instrument.pds.Internal_Reference >>> INFO Init: - Config.Properties Namespace Id Using:pds >>> INFO Init: - LDD Dictionary_Type is Discipline >>> INFO Attribute: <instrument_name> - The default minimum characters provided by the attribute's data type is being overridden with 1 >>> INFO Attribute: <instrument_name> - The default maximum characters provided by the attribute's data type is being overridden with 100 >>> INFO Attribute: <instrument_name> - This local attribute has a duplicate in the PDS4 data dictionary. >>> WARNING Init: - Config.Properties Namespace Id Not Found:test >>> WARNING Header: - New steward has been specified:geo >>> WARNING Header: - New namespace id has been specified:test -- LDDTool Execution Summary -- 4 warning(s) 0 error(s) 0 fatal error(s) >> INFO Exit(0)</pre> <p>Step 3:</p> <pre>59c59 <<test:Measurement_Instrument_reference_type>measurement_parameters_to_instrument</...> ... ><test:Measurement_Instrument_reference_type>xxx</...> <!-- only measurement_parameters_to_instrument works--></pre> <p>Step 4: standard good message</p> <p>Step 5: the Ingest_LDD restriction of Permissible_Values works</p> <pre>PDS Validate Tool Report Configuration: Version 2.0.6 Date 2021-06-05T07:33:14Z Parameters: Targets [file:/Users/rchen/Desktop/test/testLDD/im324b.xml] User Specified Schemas [file:/Users/rchen/Desktop/test/PDS4_PDS_1G00.xsd, file:/Users/rchen/Desktop/test/testLDD/PDS4_TEST_1G00_1G00.xsd] User Specified Schematrons [file:/Users/rchen/Desktop/test/PDS4_PDS_1G00.sch, file:/Users/rchen/Desktop/test/testLDD/PDS4_TEST_1G00_1G00.sch] Severity Level WARNING Recurse Directories true File Filters Used [*.*xml, *.XML] Data Content Validation on Product Level Validation on Max Errors 100000 Registered Contexts File /Users/rchen/PDS4tools/validate/resources/registered_context_products.json Product Level Validation Results FAIL: file:/Users/rchen/Desktop/test/testLDD/im324b.xml ERROR [error.label.schematron] line 59, 65: The attribute test:Measurement_Instrument_reference_type must be equal to the value 'measurement parameters to instrument'.</pre>

	<p>1 product validation(s) completed</p> <p>Summary:</p> <ul style="list-style-type: none"> 1 error(s) 0 warning(s) <p>Product Validation Summary:</p> <ul style="list-style-type: none"> 0 product(s) passed 1 product(s) failed 0 product(s) skipped <p>Referential Integrity Check Summary:</p> <ul style="list-style-type: none"> 0 check(s) passed 0 check(s) failed 0 check(s) skipped <p>Message Types:</p> <ul style="list-style-type: none"> 1 error.label.schematron <p>End of Report</p> <p>Completed execution in 2928 ms</p>
Comments	Results met success criteria.
Date of Testing	2021.06.05
Test Personnel	Richard Chen

Test Case ID	VAL.1
Description	Installation and Regression Test
Issue ID	
Success Criteria	Validation tool successfully install and runs previous testing.
Test Steps	<p>Step 1: wget https://github.com/NASA-PDS/validate/releases/download/v2.0.3/validate-2.0.3-bin.tar.gz</p> <p>Step 2: tar -zxvf validate-2.0.3-bin.tar.gz</p> <p>Step 3: ln -s PDS4.11.1.0.tools/validate-2.0.3 validate</p> <p>Step 4: validate -V</p> <p>Step 5: validate -h</p> <p>Step 6: /home/gxchen/pds-test/dph_example_archive/document/1G00</p> <p>Step 7: validate collection document inventory.xml</p>
Test Results	<p>Step 4: gov.nasa.pds:validate Version 2.0.3 Release Date: 2021-05-03 16:04:16</p> <p>Copyright 2019, by the California Institute of Technology ("Caltech"). All rights reserved.</p> <p>Step 5: usage: validate <target> <options> --add-context-products <dir/files> Explicitly specify a JSON file (or</p>

	<p>directory of files) containing additional context product information used for validation. WARNING: This should only be used for development purposes. All context products must be registered for validity of a product in an archive.</p> <p>--allow-unlabeled-files Tells the tool to not check for unlabeled files in a bundle or collection.</p> <p>Step 7: Product Level Validation Results</p> <pre>PASS: file:/home/gxchen/pds-test/dph_example_archive/document/1G00/collection_document_inventory.xml 1 product validation(s) completed</pre> <p>Summary:</p> <p>0 error(s) 0 warning(s)</p> <p>Product Validation Summary:</p> <table> <tbody> <tr><td>1</td><td>product(s) passed</td></tr> <tr><td>0</td><td>product(s) failed</td></tr> <tr><td>0</td><td>product(s) skipped</td></tr> </tbody> </table> <p>Referential Integrity Check Summary:</p> <table> <tbody> <tr><td>0</td><td>check(s) passed</td></tr> <tr><td>0</td><td>check(s) failed</td></tr> <tr><td>0</td><td>check(s) skipped</td></tr> </tbody> </table> <p>End of Report Completed execution in 13738 ms</p>	1	product(s) passed	0	product(s) failed	0	product(s) skipped	0	check(s) passed	0	check(s) failed	0	check(s) skipped
1	product(s) passed												
0	product(s) failed												
0	product(s) skipped												
0	check(s) passed												
0	check(s) failed												
0	check(s) skipped												
Comments	Results met success criteria												
Date of Testing	2021.05.20												
Test Personnel	Gary Chen												

Test Case ID	VAL.2
Description	Validate schemas
Issue ID	PASS L5.PRP.VA.8: The tool shall verify that a schema file is valid.
Success Criteria	Validation tool verifies whether a schema is well formed.
Test Steps	The validate tool does not accept a schema as its target, i.e. this does not work: Specify the schemas / schematron via command-line

	<pre> validate -x ./PDS4testScma/PDS4_PDS_1G00.xsd - S ./PDS4testScma/PDS4_PDS_1G00.sch -t testLDD/im93atm.xml Update schematron URLs and schemaLocation to point to the candidate release URLs Modify collection_document_inventory.xml in dph_example_archive <!-- Before --> <?xml-model href="https://pds.nasa.gov/pds4/pds/v1/PDS4_PDS_1E00.sch"?> <!-- After --> <?xml-model href="https://pds.jpl.nasa.gov/datastandards/schema/develop/pds/PDS4_PDS_1G00.sch" ?> <!-- Before --> xsi:schemaLocation="http://pds.nasa.gov/pds4/pds/v1 https://pds.nasa.gov/pds4/pds/v1/PDS4_PDS_1E00.xsd"> <!-- After --> xsi:schemaLocation="http://pds.nasa.gov/pds4/pds/v1 https://pds.jpl.nasa.gov/datastandards/schema/develop/pds/PDS4_PDS_1G00.xsd"> validate collection_document_inventory.xml Modify grs_inst.xml in dph_example_archive Validate grs_inst.xml </pre>																				
Test Results	<p>Step 1: standard good message Step 2: the first schema is good; the second has an important line commented out</p> <p>PDS Validate Tool Report</p> <p>Configuration:</p> <table> <tbody> <tr> <td>Version</td> <td>2.0.3</td> </tr> <tr> <td>Date</td> <td>2021-05-11T04:46:33Z</td> </tr> </tbody> </table> <p>Parameters:</p> <table> <tbody> <tr> <td>Targets</td> <td>[file:/home/gxchen/pds-test/dph_example_archive/document/1G00/collection_document_inventory.xml]</td> </tr> <tr> <td>Severity Level</td> <td>WARNING</td> </tr> <tr> <td>Recurse Directories</td> <td>true</td> </tr> <tr> <td>File Filters Used</td> <td>[*.xml, *.XML]</td> </tr> <tr> <td>Data Content Validation</td> <td>on</td> </tr> <tr> <td>Product Level Validation</td> <td>on</td> </tr> <tr> <td>Max Errors</td> <td>100000</td> </tr> <tr> <td>Registered Contexts File</td> <td>/home/gxchen/pds-test/validate/resources/registered_context_products.json</td> </tr> </tbody> </table> <p>Product Level Validation Results</p>	Version	2.0.3	Date	2021-05-11T04:46:33Z	Targets	[file:/home/gxchen/pds-test/dph_example_archive/document/1G00/collection_document_inventory.xml]	Severity Level	WARNING	Recurse Directories	true	File Filters Used	[*.xml, *.XML]	Data Content Validation	on	Product Level Validation	on	Max Errors	100000	Registered Contexts File	/home/gxchen/pds-test/validate/resources/registered_context_products.json
Version	2.0.3																				
Date	2021-05-11T04:46:33Z																				
Targets	[file:/home/gxchen/pds-test/dph_example_archive/document/1G00/collection_document_inventory.xml]																				
Severity Level	WARNING																				
Recurse Directories	true																				
File Filters Used	[*.xml, *.XML]																				
Data Content Validation	on																				
Product Level Validation	on																				
Max Errors	100000																				
Registered Contexts File	/home/gxchen/pds-test/validate/resources/registered_context_products.json																				

	<p>PASS: file:/home/gxchen/pds-test/dph_example_archive/document/1G00/collection_document_inventory.xml 1 product validation(s) completed</p> <p>Summary:</p> <p>0 error(s) 0 warning(s)</p> <p>Product Validation Summary:</p> <table> <tr><td>1</td><td>product(s) passed</td></tr> <tr><td>0</td><td>product(s) failed</td></tr> <tr><td>0</td><td>product(s) skipped</td></tr> </table> <p>Referential Integrity Check Summary:</p> <table> <tr><td>0</td><td>check(s) passed</td></tr> <tr><td>0</td><td>check(s) failed</td></tr> <tr><td>0</td><td>check(s) skipped</td></tr> </table> <p>End of Report Completed execution in 13169 ms</p> <p>Step 3: standard good message</p>	1	product(s) passed	0	product(s) failed	0	product(s) skipped	0	check(s) passed	0	check(s) failed	0	check(s) skipped
1	product(s) passed												
0	product(s) failed												
0	product(s) skipped												
0	check(s) passed												
0	check(s) failed												
0	check(s) skipped												
Comments	Results met success criteria												
Date of Testing	2021.05.20												
Test Personnel	Gary Chen												

Test Case ID	VAL.3
Description	Improve file base name check according to Standards Reference #5
Issue ID	
Success Criteria	<ul style="list-style-type: none"> - 'core' should not be valid - 'core.vmac' should be valid - 'lpt8' should not be valid - 'com4' should not be valid - 'file_aux_should_be_ok.tab' should be valid - 'lpt9.tab' should be valid - 'lpt9_should_be_ok.tab' should be valid - 'this_file_should_be_ok_core.tab' should be valid
Test Steps	<p>Step 1: Rename a test file to core- cp collection_document_inventory.xml core</p> <p>Step 2: Validate core</p> <p>Step 3: cp collection_document_inventory.xml core.vmac</p> <p>Step 4: validate core.vmac</p>

	<p>Step 5: Point xml to reference file_aux_should_be_ok</p> <pre><File> <file_name>file_aux_should_be_ok.csv</file_name> <creation_date_time>2016-03-10</creation_date_time> </File></pre> <p>Step 6: validate collection_document_inventory.xml</p>
Test Results	<p>Step 2: Product Level Validation Results</p> <p>FAIL: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/core ERROR [error.label.bad_extension] Label file names must end with the extension '.xml' ERROR [error.file.unallowed_base_name] File base name is not allowed Begin Content Validation: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/file_aux_should_be_ok.csv ERROR [error.table.bad_file_read] table 1: Error occurred while trying to read table: /home/gxchen/pds-test/PDS4test.build11.1/testValidate/file_aux_should_be_ok.csv (No such file or directory) End Content Validation: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/file_aux_should_be_ok.csv 1 product validation(s) completed</p> <p>Step 4: Product Level Validation Results</p> <p>FAIL: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/core.vmac ERROR [error.label.bad_extension] Label file names must end with the extension '.xml' 1 product validation(s) completed</p> <p>Step 6: Product Level Validation Results</p> <p>PASS: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/collection_document_inventory.xml 1 product validation(s) completed</p> <p>Summary:</p> <p>0 error(s) 0 warning(s)</p>
Comments	Results met success criteria
Date of Testing	2021.05.10
Test Personnel	Gary Chen

Test Case ID	VAL.4
Description	Update validate to throw error when a file has a space in the filename
Issue ID	validate#153
Success Criteria	Validate throws error
Test Steps	<p>Step 1: wget https://github.com/NASA-PDS-Incubator/validate/files/3844970/iue_asteroid_spectra.zip</p> <p>Step 2: unzip iue_asteroid_spectra.zip</p> <p>Step 3: cd iue_asteroid_spectra/document validate 3juno_lwr01896_ines\ fits\ headers.pdfa.xml -r validate-report.txt</p>
Test Results	<p>Step 3: Product Level Validation Results</p> <p>FAIL: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/iue_asteroid_spectra/document/3juno_lwr01896_ines%20fits%20headers.pdfa.xml</p> <p>ERROR [error.file.name_has_invalid_characters] File name uses invalid character 1 product validation(s) completed</p>
Comments	Results met success criteria
Date of Testing	2021.05.10
Test Personnel	Gary Chen

Test Case ID	VAL.5				
Description	validate#189				
Issue ID	Validate error reading tables > 2GiB.				
Success Criteria	contents of file to be valid				
Test Steps	<p>Step 1, Get testing files wget https://pds-geosciences.wustl.edu/messenger/mess-h-rss_mla-5-sdp-v1/messrs_1001/data/shbdr/jgmess_160av01_shb.dat wget https://pds-geosciences.wustl.edu/messenger/mess-h-rss_mla-5-sdp-v1/messrs_1001/data/shbdr/jgmess_160av01_shb.xml wget https://pds-geosciences.wustl.edu/messenger/mess-h-rss_mla-5-sdp-v1/messrs_1001/data/shbdr/jgmess_160av01_shb.lbl</p> <p>Step 2: run validate validate jgmess_160av01_shb.xml -R pds4.label -v2 -r validate_189.txt</p> <p>Step 3: tail -50 validate_189.txt</p>				
Test Results	<p>Step 3: PDS Validate Tool Report</p> <p>Configuration:</p> <table> <tr> <td>Version</td> <td>2.0.3</td> </tr> <tr> <td>Date</td> <td>2021-05-15T20:55:24Z</td> </tr> </table>	Version	2.0.3	Date	2021-05-15T20:55:24Z
Version	2.0.3				
Date	2021-05-15T20:55:24Z				

	<p>Parameters:</p> <pre>Targets [file:/home/gxchen/pds- test/PDS4test.build11.1/testValidate/jgmess_160av01_shb.xml] Rule Type pds4.label Severity Level WARNING Recurse Directories true File Filters Used [*.xml, *.XML] Data Content Validation on Product Level Validation on Max Errors 100000 Registered Contexts File /home/gxchen/pds- test/validate/resources/registered_context_products.json</pre> <p>Product Level Validation Results</p> <p>PASS: file:/home/gxchen/pds- test/PDS4test.build11.1/testValidate/jgmess_160av01_shb.xml 1 product validation(s) completed</p> <p>Summary:</p> <p>0 error(s) 0 warning(s)</p> <p>Product Validation Summary:</p> <table border="0"> <tr><td>1</td><td>product(s) passed</td></tr> <tr><td>0</td><td>product(s) failed</td></tr> <tr><td>0</td><td>product(s) skipped</td></tr> </table> <p>Referential Integrity Check Summary:</p> <table border="0"> <tr><td>0</td><td>check(s) passed</td></tr> <tr><td>0</td><td>check(s) failed</td></tr> <tr><td>0</td><td>check(s) skipped</td></tr> </table> <p>End of Report</p>	1	product(s) passed	0	product(s) failed	0	product(s) skipped	0	check(s) passed	0	check(s) failed	0	check(s) skipped
1	product(s) passed												
0	product(s) failed												
0	product(s) skipped												
0	check(s) passed												
0	check(s) failed												
0	check(s) skipped												
Comments	Results met success criteria												
Date of Testing	2021.05.15												
Test Personnel	Gary Chen												

Test Case ID	VAL.6
Description	Validate throws an error for unallowed directory name even though it is the base data collection.
Issue ID	validate#240
Success Criteria	This should validate successfully because it is a data collection. This is a misinterpretation of the PDS4 Standard Section 2B.2.2 and 6C.2.3, which calls

	<p>this out as an example, not a requirement. We should just throw a WARNING message here:</p> <pre>WARNING [warn.sub_directory.unallowed_name] Directory name is reserved and not in the recommended location in the bundle root directory.</pre>
Test Steps	<p>Ssh to pds-gamma.</p> <pre>validate /data/local/starbase/data/pds4/test-bundles/pds4-compil-comet-v1.0/ -R pds4.bundle</pre>
Test Results	<p>PASS: file:/data/local/starbase/data/pds4/test-bundles/pds4-compil-comet-v1.0/polarimetry/data/ WARNING [error.sub_directory.unallowed_name] Directory name is reserved and not in the recommended location in the bundle root directory</p> <p>PASS: file:/data/local/starbase/data/pds4/test-bundles/pds4-compil-comet-v1.0/polarimetry/document/ WARNING [error.sub_directory.unallowed_name] Directory name is reserved and not in the recommended location in the bundle root directory</p> <p>FAIL: file:/data/local/starbase/data/pds4/test-bundles/pds4-compil-comet-v1.0/polarimetry/collection.xml ERROR [error.table.records_mismatch] Number of records read is not equal to the defined number of records in the collection (expected 2, got 5). 38 integrity check(s) completed</p> <p>PASS: file:/data/local/starbase/data/pds4/test-bundles/pds4-compil-comet-v1.0/unid-emis/data/ WARNING [error.sub_directory.unallowed_name] Directory name is reserved and not in the recommended location in the bundle root directory</p>
Comments	Results met success criteria
Date of Testing	2021.05.10
Test Personnel	Gary Chen

Test Case ID	VAL.7
Description	validate should only do integrity checking on latest version of a collection when referenced by LID
Issue ID	validate#256
Success Criteria	The output from validate for the above run should only be performing integrity checks for version 6.0 of the collection. The software should read in all the collections matching by logical_identifier, and only perform integrity checking based upon the one that is the latest version (greatest version id).
Test Steps	<p>Step 1: <code>validate -R pds4.bundle -t insight_cameras/ --skip-content-validation --skip-product-validation -r validate256-report.txt</code></p> <p>Step 2: <code>cat validate256-report.txt grep collection_data</code></p>
Test Results	Step 2:

	PASS: file:/home/gxchen/pds-test/PDS4test.build11.1/insight_cameras/data/collection_data_6.0.xml FAIL: file:/home/gxchen/pds-test/PDS4test.build11.1/insight_cameras/data/collection_data_v2.0.xml~ FAIL: file:/home/gxchen/pds-test/PDS4test.build11.1/insight_cameras/data/collection_data_6.0.xml
Comments	Results met success criteria
Date of Testing	2021.05.10
Test Personnel	Gary Chen

Test Case ID	VAL.8
Description	Product with incorrect table binary definition pass validation.
Issue ID	validate#257
Success Criteria	validate should report the test product attached as invalid as the table field definition is not valid.
Test Steps	<p>Step 1: download test files wget https://github.com/NASA-PDS/validate/files/5415297/testProduct.zip wget https://github.com/NASA-PDS/validate/files/5459559/Product.zip</p> <p>Step 2: validate mer_raw_sc_tir_20181113_01.xml -add-context-products local_context_products.json</p> <p>Step 3: validate mer_raw_sc_tir_20200622_1.xml -add-context-products local_context_products.json</p>
Test Results	<p>Step 2: Product Level Validation Results</p> <p>PASS: gov.nasa.pds.validate.ValidateLauncher WARNING [warning.product_not_registered] Non-registered context products should only be used during archive development. All context products must be registered for a valid, released archive bundle. 1 product validation(s) completed</p> <p>FAIL: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/257/mer_raw_sc_tir_20181113_01.xml Begin Content Validation: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/257/mer_raw_sc_tir_20181113_01.fits ERROR [error.table.field_value_overlap] table 1, record 1, field 1: This field overlaps the next field. Current field ends at 25. Next field starts at 24 End Content Validation: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/257/mer_raw_sc_tir_20181113_01.fits 2 product validation(s) completed</p> <p>Summary:</p> <p>1 error(s) 1 warning(s)</p>

	<p>Step 3: Product Level Validation Results</p> <p>PASS: gov.nasa.pds.validate.ValidateLauncher WARNING [warning.product_not_registered] Non-registered context products should only be used during archive development. All context products must be registered for a valid, released archive bundle. 1 product validation(s) completed</p> <p>PASS: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/257/mer_raw_sc_tir_20200622_1.xml 2 product validation(s) completed</p> <p>Summary:</p> <p>0 error(s) 1 warning(s)</p>
Comments	Results met success criteria
Date of Testing	2021.05.10
Test Personnel	Gary Chen

Test Case ID	VAL.9
Description	Missing documentation about deprecated flags #260
Issue ID	validate#260
Success Criteria	document has deprecated flag information -D, --no-data-check (DEPRECATED) https://nasa-pds.github.io/validate/operate/index.html#Command-Line_Options
Test Steps	Open document at: https://nasa-pds.github.io/validate/operate/index.html#Command-Line_Options check Using a Configuration File section
Test Results	validate.noDataCheck true. -D, --no-data-check
Comments	Results DOES Not meet success criteria
Date of Testing	2021.05.10
Test Personnel	Gary Chen

Test Case ID	VAL.10
Description	validate 1.25.0-SNAPSHOT raises an exception when validating a product Bug performing bundle validation with nested directories.
Issue ID	validate#271, validate#273
Success Criteria	Validate should pass
Test Steps	Step 1: down load data file wget https://github.com/NASA-PDS/validate/files/5670957/bad.zip Step 2: validate -R pds4.bundle -t bad

Test Results	<p>Step 2: [gxchen@pds-gamma 273]\$ validate -R pds4.bundle -t bad</p> <p>PDS Validate Tool Report</p> <p>Configuration:</p> <table> <tbody> <tr> <td>Version</td> <td>2.0.3</td> </tr> <tr> <td>Date</td> <td>2021-05-15T23:58:50Z</td> </tr> </tbody> </table> <p>Parameters:</p> <table> <tbody> <tr> <td>Targets</td> <td>[file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/273/bad/]</td> </tr> <tr> <td>Rule Type</td> <td>pds4.bundle</td> </tr> <tr> <td>Severity Level</td> <td>WARNING</td> </tr> <tr> <td>Recurse Directories</td> <td>true</td> </tr> <tr> <td>File Filters Used</td> <td>[*.xml, *.XML]</td> </tr> <tr> <td>Data Content Validation</td> <td>on</td> </tr> <tr> <td>Product Level Validation</td> <td>on</td> </tr> <tr> <td>Allow Unlabeled Files</td> <td>false</td> </tr> <tr> <td>Max Errors</td> <td>100000</td> </tr> <tr> <td>Registered Contexts File</td> <td>/home/gxchen/pds-test/validate/resources/registered_context_products.json</td> </tr> </tbody> </table> <p>Product Level Validation Results</p> <p>FAIL: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/273/bad/bundle_ast.uv.reflectance-spectra.xml</p> <p> ERROR [error.label.context_ref_not_found] line 107: 'Context product not found: urn:nasa:pds:context:instrument:mmt.single_mirror6m5.bluespec 1 product validation(s) completed</p> <p>PASS: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/273/bad/data_hst/collection_data_hst.xml 2 product validation(s) completed</p> <p>PASS: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/273/bad/data_hst/dn/spec_01_000_dn.xml 3 product validation(s) completed</p> <p>PASS: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/273/bad/data_hst/dn/spec_01_001_dn.xml 4 product validation(s) completed</p>	Version	2.0.3	Date	2021-05-15T23:58:50Z	Targets	[file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/273/bad/]	Rule Type	pds4.bundle	Severity Level	WARNING	Recurse Directories	true	File Filters Used	[*.xml, *.XML]	Data Content Validation	on	Product Level Validation	on	Allow Unlabeled Files	false	Max Errors	100000	Registered Contexts File	/home/gxchen/pds-test/validate/resources/registered_context_products.json
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Registered Contexts File	/home/gxchen/pds-test/validate/resources/registered_context_products.json																								

	<p>PDS4 Bundle Level Validation Results</p> <p>PASS: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/273/bad/data_hst/collection_data_hst.xml 1 integrity check(s) completed</p> <p>PASS: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/273/bad/bundle_ast.uv.reflectance-spectra.xml 2 integrity check(s) completed</p> <p>PASS: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/273/bad/data_hst/dn/spec_01_000_dn.xml 3 integrity check(s) completed</p> <p>PASS: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/273/bad/data_hst/dn/spec_01_001_dn.xml 4 integrity check(s) completed</p> <p>PASS: gov.nasa.pds.validate.ValidateLauncher WARNING [info.validation.general] Multiple versions (2) of Information Model (IM) found in this run: [1.11.0.0, 1.10.0.0] for rule pds4.bundle for bundle file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/273/bad/bundle_ast.uv.reflectance-spectra.xml 5 integrity check(s) completed</p>
Comments	Results meet success criteria
Date of Testing	2021.05.10
Test Personnel	Gary Chen

Test Case ID	VAL.11
Description	Registered context products file does not retain older versions of context products.
Issue ID	validate#278
Success Criteria	Validate should pass
Test Steps	<p>Step 1: down load data file wget https://pds-geosciences.wustl.edu/insight/urn-nasa-pds-insight_documents/document_rise/trk-2-34-revn-15_tnf.xml wget https://pds-geosciences.wustl.edu/insight/urn-nasa-pds-insight_documents/document_rise/trk-2-34-revn-15_tnf.pdf</p> <p>Step 2: validate trk-2-34-revn-15_tnf.xml -R pds4.label -v1</p>
Test Results	Step 2: PDS Validate Tool Report

	<p>Configuration:</p> <table> <tr> <td>Version</td><td>2.0.3</td></tr> <tr> <td>Date</td><td>2021-05-16T00:12:03Z</td></tr> </table> <p>Parameters:</p> <table> <tr> <td>Targets</td><td>[file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/278/trk-2-34-revn-15_tnf.xml]</td></tr> <tr> <td>Rule Type</td><td>pds4.label</td></tr> <tr> <td>Severity Level</td><td>INFO</td></tr> <tr> <td>Recurse Directories</td><td>true</td></tr> <tr> <td>File Filters Used</td><td>[*.xml, *.XML]</td></tr> <tr> <td>Data Content Validation</td><td>on</td></tr> <tr> <td>Product Level Validation</td><td>on</td></tr> <tr> <td>Max Errors</td><td>100000</td></tr> <tr> <td>Registered Contexts File</td><td>/home/gxchen/pds-test/validate/resources/registered_context_products.json</td></tr> </table>	Version	2.0.3	Date	2021-05-16T00:12:03Z	Targets	[file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/278/trk-2-34-revn-15_tnf.xml]	Rule Type	pds4.label	Severity Level	INFO	Recurse Directories	true	File Filters Used	[*.xml, *.XML]	Data Content Validation	on	Product Level Validation	on	Max Errors	100000	Registered Contexts File	/home/gxchen/pds-test/validate/resources/registered_context_products.json
Version	2.0.3																						
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	<p>Product Level Validation Results</p> <p>PASS: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/278/trk-2-34-revn-15_tnf.xml</p> <p>WARNING [warning.pdf.file.not_pdfa_compliant] file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/278/trk-2-34-revn-15_tnf.pdf is not valid PDF/A file or does not exist</p> <p>1 product validation(s) completed</p>																						
	<p>Summary:</p> <p>0 error(s) 1 warning(s)</p>																						
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	<p>Message Types:</p> <table> <tr> <td>1</td><td>warning.pdf.file.not_pdfa_compliant</td></tr> </table>	1	warning.pdf.file.not_pdfa_compliant																				
1	warning.pdf.file.not_pdfa_compliant																						

	End of Report Completed execution in 15874 ms
Comments	Results meet success criteria
Date of Testing	2021.05.10
Test Personnel	Gary Chen

Test Case ID	VAL.12																				
Description	Validate fails to report error in File.file_size.																				
Issue ID	validate#281																				
Success Criteria	Validate should not pass																				
Test Steps	<p>Step 1: down load data file wget https://github.com/NASA-PDS/validate/files/5794084/testdata.tar.gz</p> <p>Step 2: validate collection_gwe_spk.xml</p>																				
Test Results	<p>Step 2: PDS Validate Tool Report</p> <p>Configuration:</p> <table> <tr> <td>Version</td> <td>2.0.3</td> </tr> <tr> <td>Date</td> <td>2021-05-16T00:20:51Z</td> </tr> </table> <p>Parameters:</p> <table> <tr> <td>Targets</td> <td>[file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/281/collection_gwe_spk.xml]</td> </tr> <tr> <td>Severity Level</td> <td>WARNING</td> </tr> <tr> <td>Recurse Directories</td> <td>true</td> </tr> <tr> <td>File Filters Used</td> <td>[*.xml, *.XML]</td> </tr> <tr> <td>Data Content Validation</td> <td>on</td> </tr> <tr> <td>Product Level Validation</td> <td>on</td> </tr> <tr> <td>Max Errors</td> <td>100000</td> </tr> <tr> <td>Registered Contexts File</td> <td>/home/gxchen/pds-test/validate/resources/registered_context_products.json</td> </tr> </table> <p>Product Level Validation Results</p> <pre> FAIL: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/281/collection_gwe_spk.xml ERROR [error.label.filesize_mismatch] Generated filesize '228' does not match supplied filesize '288' in the product label for 'file:/home/gxchen/pds- </pre>	Version	2.0.3	Date	2021-05-16T00:20:51Z	Targets	[file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/281/collection_gwe_spk.xml]	Severity Level	WARNING	Recurse Directories	true	File Filters Used	[*.xml, *.XML]	Data Content Validation	on	Product Level Validation	on	Max Errors	100000	Registered Contexts File	/home/gxchen/pds-test/validate/resources/registered_context_products.json
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Max Errors	100000																				
Registered Contexts File	/home/gxchen/pds-test/validate/resources/registered_context_products.json																				

	<pre>test/PDS4test.build11.1/testValidate/281/collection_gwe_spk.csv' 1 product validation(s) completed Summary: 1 error(s) 0 warning(s) Product Validation Summary: 0 product(s) passed 1 product(s) failed 0 product(s) skipped Referential Integrity Check Summary: 0 check(s) passed 0 check(s) failed 0 check(s) skipped Message Types: 1 error.label.filesize_mismatch End of Report Completed execution in 4611 ms</pre>
Comments	Results meet success criteria
Date of Testing	2021.05.10
Test Personnel	Gary Chen

Test Case ID	VAL.13						
Description	When validating a product with a bad schematron definition, bundle validation also fails indicating the associated product does not exist.						
Issue ID	validate#291, #301						
Success Criteria	Validate should not pass						
Test Steps	<p>Step 1: ssh to pds-gamma.</p> <p>Step2: validate -R pds4.bundle -t /data/local/starbase/data/pds4/test-bundles/pds4-compil-comet-v1.0/bundle.xml -r validate-291-report.txt</p> <p>Step 3: Tail -100 validate-291-report.txt</p>						
Test Results	<p>Step 3:</p> <p>Product Validation Summary:</p> <table> <tr><td>40</td><td>product(s) passed</td></tr> <tr><td>1</td><td>product(s) failed</td></tr> <tr><td>0</td><td>product(s) skipped</td></tr> </table> <p>Referential Integrity Check Summary:</p>	40	product(s) passed	1	product(s) failed	0	product(s) skipped
40	product(s) passed						
1	product(s) failed						
0	product(s) skipped						

	<p>42 check(s) passed 33 check(s) failed 0 check(s) skipped</p> <p>Message Types:</p> <ul style="list-style-type: none"> 32 error.validation.internal_error 27 error.table.bad_field_read 11 error.sub_directory.unallowed_name 3 error.label.filesize_mismatch 1 error.table.records_mismatch 1 error.validation.invalid_label 40 warning.label.bad_schematypens 40 warning.label.missing_schematron_spec 6 warning.pdf.file.not_pdfa_compliant 1 warning.file.not_referenced_in_label <p>info.validation.general</p>
Comments	Results meet success criteria
Date of Testing	2021.05.10
Test Personnel	Gary Chen

Test Case ID	VAL.14						
Description	Content validation incorrectly reports error for floating-point values out of specified min/max range.						
Issue ID	validate#294						
Success Criteria	In cases like the example, where the actual value (0.12345) is within the expected min-max range, no error nor warning message should be issued.						
Test Steps	<p>Step 1: Download test files wget https://github.com/NASA-PDS/validate/files/5954608/minmax-error.xml.txt mv minmax-error.xml.txt minmax-error.xml wget https://github.com/NASA-PDS/validate/files/5954611/minmax-error.csv.txt mv minmax-error.csv.txt minmax-error.csv</p> <p>Step2: validate minmax-error.xml</p>						
Test Results	<p>Step 2: PDS Validate Tool Report</p> <p>Configuration:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Version</td> <td style="width: 70%;">2.0.3</td> </tr> <tr> <td>Date</td> <td>2021-05-16T03:40:54Z</td> </tr> </table> <p>Parameters:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Targets</td> <td>[file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/294/minmax-error.xml]</td> </tr> </table>	Version	2.0.3	Date	2021-05-16T03:40:54Z	Targets	[file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/294/minmax-error.xml]
Version	2.0.3						
Date	2021-05-16T03:40:54Z						
Targets	[file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/294/minmax-error.xml]						

	<p>Severity Level WARNING Recurse Directories true File Filters Used [*.xml, *.XML] Data Content Validation on Product Level Validation on Max Errors 100000 Registered Contexts File /home/gxchen/pds-test/validate/resources/registered_context_products.json</p>
	<p>Product Level Validation Results</p> <p>PASS: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/294/minmax-error.xml</p> <p>1 product validation(s) completed</p>
	<p>Summary:</p> <p>0 error(s) 0 warning(s)</p>
	<p>Product Validation Summary:</p> <p>1 product(s) passed 0 product(s) failed 0 product(s) skipped</p>
	<p>Referential Integrity Check Summary:</p> <p>0 check(s) passed 0 check(s) failed 0 check(s) skipped</p>
	<p>End of Report Completed execution in 10822 ms</p>
Comments	Results meet success criteria
Date of Testing	2021.05.10
Test Personnel	Gary Chen

Test Case ID	VAL.15
Description	Content validation of ASCII_Integer field does not accept value with leading zeroes.
Issue ID	validate#297
Success Criteria	expected the value 00081 to be valid.
Test Steps	Step 1:

	<p>Download test files wget https://github.com/NASA-PDS/validate/files/5996475/rimfax_rdr_0081_example.zip unzip rimfax_rdr_0081_example.zip Step2: validate rimfax_rdr_0081_example.xml</p>																																
Test Results	<p>Step 2: PDS Validate Tool Report</p> <p>Configuration:</p> <table> <tr> <td>Version</td> <td>2.0.3</td> </tr> <tr> <td>Date</td> <td>2021-05-16T03:48:06Z</td> </tr> </table> <p>Parameters:</p> <table> <tr> <td>Targets</td> <td>[file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/297/rimfax_rdr_0081_example.xml]</td> </tr> <tr> <td>Severity Level</td> <td>WARNING</td> </tr> <tr> <td>Recurse Directories</td> <td>true</td> </tr> <tr> <td>File Filters Used</td> <td>[*.xml, *.XML]</td> </tr> <tr> <td>Data Content Validation</td> <td>on</td> </tr> <tr> <td>Product Level Validation</td> <td>on</td> </tr> <tr> <td>Max Errors</td> <td>100000</td> </tr> <tr> <td>Registered Contexts File</td> <td>/home/gxchen/pds-test/validate/resources/registered_context_products.json</td> </tr> </table> <p>Product Level Validation Results</p> <p>PASS: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/297/rimfax_rdr_0081_example.xml 1 product validation(s) completed</p> <p>Summary:</p> <p>0 error(s) 0 warning(s)</p> <p>Product Validation Summary:</p> <table> <tr> <td>1</td> <td>product(s) passed</td> </tr> <tr> <td>0</td> <td>product(s) failed</td> </tr> <tr> <td>0</td> <td>product(s) skipped</td> </tr> </table> <p>Referential Integrity Check Summary:</p> <table> <tr> <td>0</td> <td>check(s) passed</td> </tr> <tr> <td>0</td> <td>check(s) failed</td> </tr> <tr> <td>0</td> <td>check(s) skipped</td> </tr> </table>	Version	2.0.3	Date	2021-05-16T03:48:06Z	Targets	[file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/297/rimfax_rdr_0081_example.xml]	Severity Level	WARNING	Recurse Directories	true	File Filters Used	[*.xml, *.XML]	Data Content Validation	on	Product Level Validation	on	Max Errors	100000	Registered Contexts File	/home/gxchen/pds-test/validate/resources/registered_context_products.json	1	product(s) passed	0	product(s) failed	0	product(s) skipped	0	check(s) passed	0	check(s) failed	0	check(s) skipped
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0	product(s) skipped																																
0	check(s) passed																																
0	check(s) failed																																
0	check(s) skipped																																

	End of Report Completed execution in 5274 ms
Comments	Results meet success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	VAL.16
Description	validate misses double quotes within a delimited table.
Issue ID	validate#298
Success Criteria	Validate should not pass
Test Steps	<p>Step 1: Download test files wget https://github.com/NASA-PDS/validate/files/5998735/Archive.zip unzip Archive.zip</p> <p>Step2: validate sentences.xml</p>
Test Results	<p>Step 2:</p> <pre>Begin Content Validation: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/298/sentences.csv ERROR [error.validation.invalid_field_value] table 1, record 4, field 3: The field value ""The data sets consist of (1) three small "photometric spot" sub-framed (64x64 pixel) scenes located approximately north (near the rock "Shaggy"), south (near the "Mermaid Dune"), and west of the lander ("Photometry Flats"), (2) two image strips composed of three sub-framed (96x248 pixel) images each, located along the anti-sunrise and anti-sunset lines ("Photometric equator") extending from near the lander to near the horizon; and (3) full-image scenes of the rock "Yogi."'' that starts with double quote should not contain double quote(s)</pre>
Comments	Results meet success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	VAL.17
Description	Validate tool does not PASS a bundle with a single-character filename.
Issue ID	validate#299
Success Criteria	Validate should pass
Test Steps	<p>Step 1: Download test files</p>

	<pre>wget https://github.com/NASA-PDS/validate/files/6003561/gbo_ast_fieber-beyer_spectra_v2.0_20210211.zip unzip gbo_ast_fieber-beyer_spectra_v2.0_20210211.zip Step 2: validate -R pds4.label -r validate-299.json -s json -t 299/gbo_ast_fieber-beyer_spectra_v2.0_20210211_aip_v1.0.xml Step 3: egrep "status label" validate-299.json</pre>
Test Results	<pre>Step 3: "ruleType": "pds4.label", "status": "PASS", "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/299/gbo_ast_fieber-beyer_spectra_v2.0_20210211_aip_v1.0.xml",</pre>
Comments	Results meet success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	VAL.18
Description	validate -u flag reports an error on Windows.
Issue ID	validate#300
Success Criteria	No error message displayed.
Test Steps	<pre>Step 1: Validate -u</pre>
Test Results	<pre>Step 3: "ruleType": "pds4.label", "status": "PASS", "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/299/gbo_ast_fieber-beyer_spectra_v2.0_20210211_aip_v1.0.xml",</pre>
Comments	Results meet success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	VAL.20
Description	Validate missing collections in bundle after CCB-282 updates.
Issue ID	validate#310
Success Criteria	Collection should pass.
Test Steps	<pre>Step 1: Download files 1207 2021-05-15 wget https://github.com/NASA-PDS/validate/files/6175135/m2.zip 1208 2021-05-15 unzip m2 Step 2: validate -R pds4.bundle -t m2</pre>

Test Results	Step 2: PASS: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/310/m2/data/collection-data-bst-1.0.xml 3 integrity check(s) completed
Comments	Results meet success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	VAL.21
Description	Update allowable field_format values per Standards Reference definition regarding [+ -] characters
Issue ID	validate#11
Success Criteria	In PDS4 labels, the "+" is forbidden for string fields. Test file should not pass.
Test Steps	Step 1: Download files wget https://github.com/NASA-PDS-Incubator/pds4-validate-tool/files/3322244/test_data.zip unzip test_data.zip Step 2: Cd /home/gxchen/pds-test/PDS4test.build11.1/testValidate/11/test_data validate -R pds4.label --skip-context-validation -t science_index.xml
Test Results	Step 2: [gxchen@pds-gamma test_data]\$ validate -R pds4.label --skip-context-validation -t science_index.xml PDS Validate Tool Report Configuration: Version 2.0.3 Date 2021-06-09T06:01:57Z Parameters: Targets [file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/11/test_data/science_index.xml] Rule Type pds4.label Severity Level WARNING Recurse Directories true File Filters Used (*.xml, *.XML) Data Content Validation on Product Level Validation on Max Errors 100000 Registered Contexts File /home/gxchen/pds-test/validate/resources/registered_context_products.json

	<p>Product Level Validation Results</p> <pre> FAIL: file:/home/gxchen/pds- test/PDS4test.build11.1/testValidate/11/test_data/science_index.xml Begin Content Validation: file:/home/gxchen/pds- test/PDS4test.build11.1/testValidate/11/test_data/science_index.xml ERROR [error.validation.invalid_label] : ASCII String related fields should not contain '+' symbol in field_format [%+8s] in field_number 2 End Content Validation: file:/home/gxchen/pds- test/PDS4test.build11.1/testValidate/11/test_data/science_index.xml 1 product validation(s) completed </pre> <p>Summary:</p> <p>1 error(s) 0 warning(s)</p> <p>Product Validation Summary:</p> <table> <tbody> <tr><td>0</td><td>product(s) passed</td></tr> <tr><td>1</td><td>product(s) failed</td></tr> <tr><td>0</td><td>product(s) skipped</td></tr> </tbody> </table> <p>Referential Integrity Check Summary:</p> <table> <tbody> <tr><td>0</td><td>check(s) passed</td></tr> <tr><td>0</td><td>check(s) failed</td></tr> <tr><td>0</td><td>check(s) skipped</td></tr> </tbody> </table> <p>Message Types:</p> <table> <tbody> <tr><td>1</td><td>error.validation.invalid_label</td></tr> </tbody> </table> <p>End of Report Completed execution in 4839 ms</p>	0	product(s) passed	1	product(s) failed	0	product(s) skipped	0	check(s) passed	0	check(s) failed	0	check(s) skipped	1	error.validation.invalid_label
0	product(s) passed														
1	product(s) failed														
0	product(s) skipped														
0	check(s) passed														
0	check(s) failed														
0	check(s) skipped														
1	error.validation.invalid_label														
Comments	Results does not meet success criteria														
Date of Testing	2021.05.20														
Test Personnel	Gary Chen														

Test Case ID	VAL.22
Description	Validate schematron references and throw fatal error if invalid URI specified.
Issue ID	validate#17
Success Criteria	Validate should give a warning message
Test Steps	<p>Step 1: Modify xml file collection_document_inventory.xml egrep "?xml-model" collection_document_inventory.xml</p>

	Step 2: validate collection_document_inventory.xml
Test Results	<p>Step 1: <?xml-model href="https://pds.jpl.nasa.gov/datastandards/schema/develop/pds/PDS4_PDS_1G0.sch" schematypens="http://purl.oclc.org/dsdl/schematron"?></p> <p>Step 2: WARNING [warning.label.bad_schematypens] Invalid xml-model statement. Expecting a space before pattern [schematypens=] in href="https://pds.jpl.nasa.gov/datastandards/schema/develop/pds/PDS4_PDS_1G0.sch" schematypens="http://purl.oclc.org/dsdl/schematron"</p>
Comments	Results meet success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	VAL.23																				
Description	Update context check to retrieve and use latest context products from EN Registry.																				
Issue ID	validate#24																				
Success Criteria	Validate should run an update																				
Test Steps	Step 1: validate -u																				
Test Results	<p>Step 1: PDS Validate Tool Report</p> <p>Configuration:</p> <table> <tr> <td>Version</td> <td>2.0.3</td> </tr> <tr> <td>Date</td> <td>2021-05-16T05:37:33Z</td> </tr> </table> <p>Parameters:</p> <table> <tr> <td>Targets</td> <td>[]</td> </tr> <tr> <td>Severity Level</td> <td>WARNING</td> </tr> <tr> <td>Recurse Directories</td> <td>true</td> </tr> <tr> <td>File Filters Used</td> <td>[*.xml, *.XML]</td> </tr> <tr> <td>Data Content Validation</td> <td>on</td> </tr> <tr> <td>Product Level Validation</td> <td>on</td> </tr> <tr> <td>Max Errors</td> <td>100000</td> </tr> <tr> <td>Registered Contexts File</td> <td>/home/gxchen/pds-test/validate/resources/registered_context_products.json</td> </tr> </table> <p>Product Level Validation Results</p>	Version	2.0.3	Date	2021-05-16T05:37:33Z	Targets	[]	Severity Level	WARNING	Recurse Directories	true	File Filters Used	[*.xml, *.XML]	Data Content Validation	on	Product Level Validation	on	Max Errors	100000	Registered Contexts File	/home/gxchen/pds-test/validate/resources/registered_context_products.json
Version	2.0.3																				
Date	2021-05-16T05:37:33Z																				
Targets	[]																				
Severity Level	WARNING																				
Recurse Directories	true																				
File Filters Used	[*.xml, *.XML]																				
Data Content Validation	on																				
Product Level Validation	on																				
Max Errors	100000																				
Registered Contexts File	/home/gxchen/pds-test/validate/resources/registered_context_products.json																				

	<p>PASS: /home/gxchen/pds-test/validate/resources/registered_context_products.json</p> <p>Begin Fragment: https://pds.nasa.gov/services/search</p> <p>INFO [info.validation.general] Successfully updated registered context products config file.</p> <p>INFO [info.validation.general] 2605 registered context products found.</p> <p>End Fragment: https://pds.nasa.gov/services/search</p> <p>1 product validation(s) completed</p> <p>Summary:</p> <p>0 error(s)</p> <p>0 warning(s)</p> <p>Product Validation Summary:</p> <table> <tr><td>2020</td><td>product(s) passed</td></tr> <tr><td>2020</td><td>product(s) failed</td></tr> <tr><td>2020</td><td>product(s) skipped</td></tr> </table> <p>Referential Integrity Check Summary:</p> <table> <tr><td>2020</td><td>check(s) passed</td></tr> <tr><td>2020</td><td>check(s) failed</td></tr> <tr><td>2020</td><td>check(s) skipped</td></tr> </table> <p>End of Report Completed execution in 3182 ms</p>	2020	product(s) passed	2020	product(s) failed	2020	product(s) skipped	2020	check(s) passed	2020	check(s) failed	2020	check(s) skipped
2020	product(s) passed												
2020	product(s) failed												
2020	product(s) skipped												
2020	check(s) passed												
2020	check(s) failed												
2020	check(s) skipped												
Comments	Results meet success criteria												
Date of Testing	2021.05.20												
Test Personnel	Gary Chen												

Test Case ID	VAL.25
Description	Provide the capability to specify multiple locations for pds4.bundle validation.
Issue ID	validate#51
Success Criteria	Validate should pass
Test Steps	<p>Step 1: Split urn-nasa-pds-insight-documents in to two additional directories Urn-nasa-alt1, urn-nasa-alt2 Move document_hp3rad to urn-nasa-alt1 Move document_seis to urn-nasa-alt2</p> <p>Step 2: validate -R pds4.bundle –skip-product-validation –skip-context-validation -r validate-269.json -s json –alternate_file_paths urn-nasa-alt1,urn-nasa-alt2 -t urn-nasa-pds-insight_documents/bundle_insight_documents.xml</p> <p>Step 3:</p>

	egrep "status label" validate-269.json
Test Results	<p>Step 3:</p> <pre> "status": "PASS", "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa- pds-insight_documents/bundle_insight_documents.xml", "status": "PASS", "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa- alt1/document_hp3rad/collection_document_hp3rad.xml", "status": "PASS", "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa- alt1/document_hp3rad/hp3_rad_sis.xml", "status": "PASS", "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa- alt1/document_hp3rad/release_notes.xml", "status": "PASS", "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa- alt2/document_seis/collection_document_seis.xml", "status": "PASS", "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa- alt2/document_seis/fdsn-station-1.0.xml", "status": "PASS", "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa- alt2/document_seis/fdsn-station-availability-1.0.xml", "status": "PASS", "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa- alt2/document_seis/ins-st-grds-1500-ipgp_seed_channelnaming.xml", "status": "PASS", "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa- alt2/document_seis/location_codes_only.xml", "status": "PASS", "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa- alt2/document_seis/seedmanual_v2.4.xml", "status": "PASS", "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa- alt2/document_seis/seis_release_notes.xml", "status": "PASS", "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa- alt2/document_seis/seis_sis.xml", "status": "PASS", "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa- alt2/document_seis/variations-fdsnsxml-seed.xml", "status": "PASS", "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa- pds-insight_documents/document_ida/collection_document_ida.xml", "status": "PASS", </pre>

“label”: “file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-pds-insight_documents/document_ida/ida_release_notes.xml”,
“status”: “PASS”,
“label”: “file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-pds-insight_documents/document_ida/insight_ida_bundle_sis.xml”,
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“status”: “PASS”,
“label”: “file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-pds-insight_documents/document_mission/InSight_PIP_final-2015_Redacted_5-10-19reda.xml”,
“status”: “PASS”,
“label”: “file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-pds-insight_documents/document_rise/collection_document_inventory_v5.0.xml”,
“status”: “PASS”,
“label”: “file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-pds-insight_documents/document_rise/InSight_EastWestMGA.xml”,
“status”: “PASS”,
“label”: “file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-pds-insight_documents/document_rise/release_notes.xml”,
“status”: “PASS”,
“label”: “file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-pds-insight_documents/document_rise/RISE_InSight_SIS_Raw.xml”,
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“label”: “file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-pds-insight_documents/document_rise/trk-2-23-revc-15_ion_tro.xml”,
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“label”: “file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-pds-insight_documents/document_rise/trk-2-24-reva-15_wea.xml”,
“status”: “PASS”,
“label”: “file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-pds-insight_documents/document_rise/trk-2-34-revn-15_tnf.xml”,
“status”: “PASS”,
“label”: “file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-pds-insight_documents/document_ida/collection_document_ida.xml”,
“status”: “PASS”,
“label”: “file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-pds-insight_documents/document_mission/collection_document_mission.xml”,
“status”: “PASS”,
“label”: “file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-pds-insight_documents/document_rise/collection_document_inventory_v5.0.xml”,
“status”: “PASS”,
“label”: “file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-pds-insight_documents/bundle_insight_documents.xml”,
“status”: “PASS”,

```

    "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-alt2/document_seis/ins-st-grds-1500-ipgp_seed_channelnaming.xml",
    "status": "PASS",
    "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-pds-insight_documents/document_rise/InSight_EastWestMGA.xml",
    "status": "PASS",
    "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-pds-insight_documents/document_ida/ida_release_notes.xml",
    "status": "PASS",
    "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-pds-insight_documents/document_rise/RISE_InSight_SIS_Raw.xml",
    "status": "PASS",
    "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-pds-insight_documents/document_ida/insight_ida_bundle_sis.xml",
    "status": "PASS",
    "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-alt1/document_hp3rad/collection_document_hp3rad.xml",
    "status": "PASS",
    "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-alt2/document_seis/collection_document_seis.xml",
    "status": "PASS",
    "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-alt2/document_seis/fdsn-station-1.0.xml",
    "status": "PASS",
    "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-alt1/document_hp3rad/release_notes.xml",
    "status": "PASS",
    "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-alt2/document_seis/seis_release_notes.xml",
    "status": "PASS",
    "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-alt2/document_seis/variations-fdsnsxml-seed.xml",
    "status": "PASS",
    "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-alt2/document_seis/location_codes_only.xml",
    "status": "PASS",
    "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-alt2/document_seis/seedmanual_v2.4.xml",
    "status": "PASS",
    "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-pds-insight_documents/document_rise/trk-2-23-revc-l5_ion_tro.xml",
    "status": "PASS",
    "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-alt2/document_seis/fdsn-station-availability-1.0.xml",
    "status": "PASS",
  
```

	<p>“label”: “file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-pds-insight_documents/document_mission/InSight_PIP_final-2015_Redacted_5-10-19reda.xml”, “status”: “PASS”, “label”: “file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-pds-insight_documents/document_rise/trk-2-34-revn-15_tnf.xml”, “status”: “PASS”, “label”: “file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-pds-insight_documents/document_rise/release_notes.xml”, “status”: “PASS”, “label”: “file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-pds-insight_documents/document_rise/trk-2-24-reva-15_wea.xml”, “status”: “PASS”, “label”: “file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-alt1/document_hp3rad/hp3_rad_sis.xml”, “status”: “PASS”, “label”: “file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-alt2/document_seis/seis_sis.xml”, “status”: “PASS”, “label”: “gov.nasa.pds.validate.ValidateLauncher”, “status”: “PASS”, “label”: “file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-alt1/”, “status”: “PASS”, “label”: “file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/urn-nasa-alt2/”,</p>
Comments	Results meet success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	VAL.26
Description	Validate schematron references and throw fatal error if invalid URI specified.
Issue ID	validate#81
Success Criteria	Validate should give a warning message
Test Steps	<p>Step 1: Modify test bundle pds4-soho-v1.0 vi soho_mission.xml change lid to “urn:nasa:pds:soho:document:soho_spacecraft_overview” from “urn:nasa:pds:soho:document:mission_overview”</p> <p>Step 2: validate -R pds4.bundle –skip-product-validation –skip-context-validation -r validate-81.json -s json -t pds4-soho-v1.0/bundle.xml</p>
Test Results	<p>“status”: “PASS”, “label”: “file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/pds4-soho-v1.0/document/overview/soho_mission.xml”,</p>

	"status": "FAIL", "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/test-bundles/pds4-soho-v1.0/document/overview/soho_spacecraft.xml", "type": "error.label.duplicate_identifier",
Comments	Results meet success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	VAL.27
Description	Update validate per SR Requirements for collection inventories.
Issue ID	validate#230
Success Criteria	Validate should fail
Test Steps	<p>Step 1: Download test data wget https://github.com/NASA-PDS/validate/files/4648191/cocirs_c2h4abund.tar.gz tar -zxvf cocirs_c2h4abund.tar.gz</p> <p>Step 2: validate -R pds4.bundle --skip-product-validation --skip-context-validation -r validate-230.json -s json -t cocirs_c2h4abund/bundle_cocirs_c2h4abund.xml</p>
Test Results	<p>Step 2:</p> <pre>{ "status": "FAIL", "label": "file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/230/cocirs_c2h4abund/data/collection_cocirs_c2h4abund.xml", "messages": [{ "severity": "ERROR", "type": "error.integrity.missing_version", "message": "The primary member 'urn:nasa:pds:cocirs_c2h4abund:data_derived:c2h4_abund_profiles' should include the version number" }, { "severity": "ERROR", "type": "error.integrity.missing_version", "message": "The primary member 'urn:nasa:pds:cocirs_c2h4abund:data_derived:c2h4_temp_profiles' should include the version number" }], "fragments": [], "dataContents": [] }</pre>
Comments	Results meet success criteria

Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	VAL.28
Description	validate does not perform full bundle validation when using a specific bundle.xml validate does not perform expediently when doing bundle-level validation against large bundles
Issue ID	validate#238, validate#254
Success Criteria	For an accumulating PDS 4 bundle, where there are different bundle.xml files per release, being able to specify a given bundle.xml file will now ensure that only the products associated with that particular bundle.xml set of collections will be validated
Test Steps	<p>Step 1: cd insight_cameras/ ll</p> <p>Step 2: validate -R pds4.bundle -r validate-238.json -s json --skip-content-validation -t insight_cameras/bundle.xml -l validate-238.json</p> <p>Step 3: egrep "not_referenced_in_label" validate-238.json</p>
Test Results	<p>Step 2: gxchen 4124915 1 0 17:55 ? 00:00:00 /bin/sh /home/gxchen/pds-test/validate/bin/validate -R pds4.bundle -r validate-238.json -s json --skip-content-validation -t insight_cameras/bundle.xml -rw-r-r-1 gxchen pds 58291213 May 17 00:25 validate-238.json Validate time ~5 hours.</p> <p>Step 3:</p> <pre>"message": "File is not referenced by any label" "message": "File is not referenced by any label"</pre>
Comments	Results meet success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	VAL.29
Description	Add output directory flag to validate-bundle tool
Issue ID	validate#246
Success Criteria	the user now can specify -d or --dir-path for a top level output directory

Test Steps	<p>Step 1: validate-bundle -h</p> <p>Step 2: validate-bundle -t test-bundles/urn-nasa-pds-insight_documents/bundle_insight_documents.xml -r testValidate/246/validate-report.txt -d testValidate/246/</p>
Test Results	<p>Step 1: Arguments:</p> <p style="padding-left: 40px;">-d, --dir-path <dir-path> <small>Optional argument to specify the directory to output</small></p> <p>Step 2 validate binary is available (/home/gxchen/pds-test/validate/bin/validate) [OK] GNU parallel binary is available (/home/gxchen/.linuxbrew/bin/parallel) [OK] Directory to process is : test-bundles/urn-nasa-pds-insight_documents Number of effective cores on this system: 4 Half of effective cores on this system : 2 (usually better than running all cores) Splitting up into groups, based on number of cores this machine has...</p>
Comments	Results meet success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	VAL.30
Description	As a user, I want to validate a bundle that uses multiple versions of the Information Model / Discipline LDDs
Issue ID	validate#188
Success Criteria	Validate should pass
Test Steps	<p>Step 1: Download test files: wget https://github.com/NASA-PDS-Incubator/validate/files/4228354/BILQH07S314_D065_T008S02_V02.xml.txt wget https://github.com/NASA-PDS-Incubator/validate/files/4228355/bundle_cassini-huygens-coradar.xml.txt</p> <p>Step 2: validate -t bundle_cassini-huygens-coradar.xml BILQH07S314 D065 T008S02 V02.xml</p>
Test Results	<p>Step 2: Arguments:</p> <p style="padding-left: 40px;">-d, --dir-path <dir-path> <small>Optional argument to specify the directory to output</small></p> <p>Step 2 Product Level Validation Results</p>

	<pre>PASS: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/188/bundle_cassini-huygens-coradar.xml 1 product validation(s) completed PASS: gov.nasa.pds.validate.ValidateLauncher WARNING [info.validation.general] Multiple versions (2) of Information Model (IM) found in this run: [1.10.0.0, 1.12.0.0] for bundle file:/home/gxchen/pds- test/PDS4test.build11.1/testValidate/188/bundle_cassini- huygens-coradar.xml 3 product validation(s) completed</pre>
Comments	Results meet success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	VAL.31
Description	Update installation documentation to include 64-bit Java as system requirement
Issue ID	validate#264
Success Criteria	Documentation should be updated to explicitly call out 64-bit Java and to run <code>java -d64</code> to test to make sure that is the version being used.
Test Steps	Step 1: Check validate installation document https://nasa-pds.github.io/validate/install/index.html
Test Results	Step 1: <i>NOTE: Validate requires 64-bit Java in order to enable Java Virtual Machine memory Requirements. In version output above, note the line Java HotSpot™ 64-Bit Server VM</i>
Comments	Results meet success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	VAL.32
Description	Update installation documentation to require Java 1.9+
Issue ID	validate#322
Success Criteria	Documentation should be updated to require java 1.9+.
Test Steps	Step 1: Check validate installation document https://nasa-pds.github.io/validate/install/index.html
Test Results	Step 1: If the either of these commands fail, it indicates Java is not installed or the version is not at least 1.9. Consult the local system administrator for installation of this software. For the do-it-yourself crowd, the Java software can be downloaded from the Java Download page.

Comments	Results meet success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	VAL.33
Description	As a user, I want validate to raise a WARNING when differing versions of IM are used within a bundle
Issue ID	validate#210
Success Criteria	Validate gives a warning when multiple version of IM is found
Test Steps	<p>Step 1: validate -R pds4.bundle -r validate-238.json -s json --skip-content-validation -t insight_cameras/bundle.xml</p> <p>Step 2: egrep "Multiple versions" validate-238.json</p>
Test Results	<p>Step 2:</p> <p>"message": "Multiple versions (2) of Information Model (IM) found in this run: [1.11.1.0, null] for rule pds4.bundle for bundle file:/home/gxchen/pds-test/PDS4test.build11.1/insight_cameras/bundle.xml"</p>
Comments	Results meet success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	VAL.34
Description	CCB-264: Make the Line Feed (LF) character an allowed record delimiter
Issue ID	validate#292
Success Criteria	Should not fail with records ending in line feed.
Test Steps	<p>Step 1: Download test files Wget https://github.com/NASA-PDS/validate/files/5884209/minimal_test_product_line_endings.zip</p> <p>Unzip file</p> <p>Step 2: Modify both xml files with new schemaLocation. Modify minimal_test_product_lf.xml with <code><record_delimiter>Line-Feed</record_delimiter></code></p> <p>Step 3: Cd /home/gxchen/pds-test/PDS4test.build11.1/testValidate/292 validate -t minimal_test_product_lf.xml --skip-context-validation</p> <p>Step 4: validate -t minimal_test_product_crlf.xml --skip-context-validation</p>
Test Results	<p>Step 3:</p> <pre>[gxchen@pds-gamma 292]\$ validate -t minimal_test_product_lf.xml --skip-context-validation</pre>

PDS Validate Tool Report

Configuration:

Version	2.0.3
Date	2021-06-09T05:44:35Z

Parameters:

Targets	[file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/292/minimal_test_product_lf.xml]
Severity Level	WARNING
Recurse Directories	true
File Filters Used	[*.xml, *.XML]
Data Content Validation	on
Product Level Validation	on
Max Errors	100000
Registered Contexts File	/home/gxchen/pds-test/validate/resources/registered_context_products.json

Product Level Validation Results

PASS: file:/home/gxchen/pds-test/PDS4test.build11.1/testValidate/292/minimal_test_product_lf.xml

WARNING [warning.label.schematron] line 42, 35: The value Spacecraft for attribute Observing_System_Component.type is deprecated and should not be used.

1 product validation(s) completed

Summary:

0 error(s)
1 warning(s)

Product Validation Summary:

1	product(s) passed
0	product(s) failed
0	product(s) skipped

Referential Integrity Check Summary:

0	check(s) passed
0	check(s) failed
0	check(s) skipped

Message Types:

1	warning.label.schematron
---	--------------------------

```
End of Report
Completed execution in 4618 ms

Step 4:
[gxchen@pds-gamma 292]$ validate -t
minimal_test_product_crlf.xml --skip-context-validation

PDS Validate Tool Report

Configuration:
  Version           2.0.3
  Date              2021-06-09T05:49:22Z

Parameters:
  Targets           [file:/home/gxchen/pds-
test/PDS4test.build11.1/testValidate/292/minimal_test_produc
t_crlf.xml]
  Severity Level    WARNING
  Recurse Directories   true
  File Filters Used   [*.xml, *.XML]
  Data Content Validation  on
  Product Level Validation  on
  Max Errors         100000
  Registered Contexts File /home/gxchen/pds-
test/validate/resources/registered_context_products.json

Product Level Validation Results

  PASS: file:/home/gxchen/pds-
test/PDS4test.build11.1/testValidate/292/minimal_test_produc
t_crlf.xml
  WARNING [warning.label.schematron] line 42, 35: The
  value Spacecraft for attribute
  Observing_System_Component.type is deprecated and should not
  be used.
  1 product validation(s) completed

Summary:

  0 error(s)
  1 warning(s)

Product Validation Summary:
  1      product(s) passed
  0      product(s) failed
  0      product(s) skipped
```

	<p>Referential Integrity Check Summary:</p> <p>0 check(s) passed 0 check(s) failed 0 check(s) skipped</p> <p>Message Types:</p> <p>1 warning.label.schematron</p> <p>End of Report Completed execution in 6033 ms</p>
Comments	Results meet success criteria
Date of Testing	2021.06.08
Test Personnel	Gary Chen

Test Case ID	DEEP.1
Description	Installation and Regression Test
Issue ID	
Success Criteria	Deep-archive tool successfully install and runs previous testing.
Test Steps	<pre>1617 2021-05-18 python3 -m venv .virtualenvs/pds-deep-archive 1618 2021-05-18 ll .virtualenvs/pds-deep-archive/ 1619 2021-05-18 source .virtualenvs/pds-deep-archive/bin/activate 1620 2021-05-18 pip3 install pds.deeparchive 1621 2021-05-18 pds-deep-archive --help 1622 2021-05-18 pds-deep-archive --version 1623 2021-05-18 cd .virtualenvs/pds-deep-archive/</pre>
Test Results	<pre>Collecting pds.deeparchive Downloading https://files.pythonhosted.org/packages/1c/35/0c618244893b2af5d57c23f8569b0d034a7c71095316a3a0c9b4cd320442/pds.deeparchive-1.0.0-py3-none-any.whl (23.1MB) 100% ██████████ 23.1MB 51kB/s Requirement already satisfied: setuptools in ./virtualenvs/pds-deep-archive/lib/python3.6/site-packages (from pds.deeparchive) Collecting zope.interface (from pds.deeparchive) Downloading https://files.pythonhosted.org/packages/67/67/8178e511cd4f0a481082aac1c0e2d64c520a5ee92ea8ce42d8297a4fca7e/zope.interface-5.4.0-cp36-cp36m-manylinux1_x86_64.whl (251kB) 100% ██████████ 256kB 3.5MB/s Collecting lxml (from pds.deeparchive) Downloading https://files.pythonhosted.org/packages/1f/1d/a4485412268b38043a6c0f873245b5d9315c6615bcf44776759a2605dca5/lxml-4.6.3-cp36-cp36m-manylinux1_x86_64.whl (5.5MB) 100% ██████████ 5.5MB 220kB/s</pre>

```
Collecting zope.component (from pds.deeparchive)
  Downloading
    https://files.pythonhosted.org/packages/0d/df/e9f3cf96309dd84f2
    4ad842eb41969bb5085bafb92efb19443f9ddf9beb2/zope.component-
    5.0.0-py2.py3-none-any.whl (68kB)
      100% |██████████| 71kB 935kB/s
Collecting pds.api-client==0.4.0 (from pds.deeparchive)
  Downloading
    https://files.pythonhosted.org/packages/f1/7e/8051d4cfdc313c325
    80bb10530b022dbe3d25011e5ecf41d1f1ea286236f/pds.api_client-
    0.4.0-py3-none-any.whl (71kB)
      100% |██████████| 71kB 1.6MB/s
Collecting zope.event (from zope.component->pds.deeparchive)
  Downloading
    https://files.pythonhosted.org/packages/9e/85/b45408c64f3b88897
    6f1d5b37eed8d746b8d5729a66a49ec846fda27d371/zope.event-4.5.0-
    py2.py3-none-any.whl
Collecting zope.hookable>=4.2.0 (from zope.component-
>pds.deeparchive)
  Downloading
    https://files.pythonhosted.org/packages/f2/c6/0e8d591db8f2cebb4
    312fc1fe218505a86c9aebff7148027a113c30f3e64/zope.hookable-
    5.0.1-cp36-cp36m-manylinux1_x86_64.whl
Collecting python-dateutil (from pds.api-client==0.4.0-
>pds.deeparchive)
  Using cached
    https://files.pythonhosted.org/packages/d4/70/d60450c3dd48ef875
    86924207ae8907090de0b306af2bce5d134d78615cb/python_dateutil-
    2.8.1-py2.py3-none-any.whl
Collecting urllib3>=1.15 (from pds.api-client==0.4.0-
>pds.deeparchive)
  Downloading
    https://files.pythonhosted.org/packages/09/c6/d3e3abe5b4f4f16cf
    0dfc9240ab7ce10c2baa0e268989a4e3ec19e90c84e/urllib3-1.26.4-
    py2.py3-none-any.whl (153kB)
      100% |██████████| 153kB 3.7MB/s
Collecting certifi (from pds.api-client==0.4.0-
>pds.deeparchive)
  Cache entry deserialization failed, entry ignored
  Downloading
    https://files.pythonhosted.org/packages/5e/a0/5f06e1e1d463903cf
    0c0eebeb751791119ed7a4b3737fdc9a77f1cdfb51f/certifi-2020.12.5-
    py2.py3-none-any.whl (147kB)
      100% |██████████| 153kB 979kB/s
Collecting six>=1.10 (from pds.api-client==0.4.0-
>pds.deeparchive)
  Downloading
    https://files.pythonhosted.org/packages/d9/5a/e7c31adbe875f2abb
    b91bd84cf2dc52d792b5a01506781dbc25c91daf11/six-1.16.0-py2.py3-
    none-any.whl
```

	<p>Installing collected packages: zope.interface, lxml, zope.event, zope.hookable, zope.component, six, python-dateutil, urllib3, certifi, pds.api-client, pds.deeparchive Successfully installed certifi-2020.12.5 lxml-4.6.3 pds.api-client-0.4.0 pds.deeparchive-1.0.0 python-dateutil-2.8.1 six-1.16.0 urllib3-1.26.4 zope.component-5.0.0 zope.event-4.5.0 zope.hookable-5.0.1 zope.interface-5.4.0</p> <p>You are using pip version 9.0.3, however version 21.1.1 is available. You should consider upgrading via the 'pip install --upgrade pip' command.</p> <pre>(pds-deep-archive) [gxchen@pds-gamma ~]\$ pds-deep-archive --help usage: pds-deep-archive [-h] [--version] [--include-latest-collection-only] -s {PDS_ATM,PDS_ENG,PDS_GEO,PDS_IMG,PDS_JPL,PDS_NAI,PDS_PPI,PDS_PS I,PDS_RNG,PDS_SBN} -b BUNDLE_BASE_URL [-D] [-d -q] IN-BUNDLE.XML</pre>
Comments	Results met success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	DEEP.2
Description	Small typo on package documentation
Issue ID	pds-deep-archive_90
Success Criteria	The documentation describes the following argument: <code>--include-latest-collections-only</code> whereas it should be <code>--include-latest-collection-only</code>
Test Steps	<p>Step 1: Go to: https://nasa-pds.github.io/pds-deep-archive/usage/index.html#usage-information</p> <p>Step 2: Search “<code>--include-latest-collection-only</code>”</p>

Test Results	<pre> INFO 📁 PDS Deep Archive, version VERSION-NUMBER INFO 🚀 Starting AIP generation for test/data/ladee_test/mission_bundle_v1.0 INFO 🎉 Success! AIP done, files generated: INFO 📁 Checksum manifest: ladee_mission_bundle_v1.0_checksum_manifest.tab INFO 📁 Transfer manifest: ladee_mission_bundle_v1.0_transfer_manifest.tab INFO 📁 XML label for them both: ladee_mission_bundle_v1.0_aip_v1.0_label.xml INFO 🚀 Starting SIP generation for test/data/ladee_test/mission_bundle_v1.0 INFO 🎉 Success! From /SOME/DIR/test/data/ladee_test/mission_bundle/ INFO 📁 SIP Manifest: ladee_mission_bundle_v1.0_sip_v1.0_DATE.tab allCollections=args.include_latest_collection_only, INFO 📁 XML label for the SIP: ladee_mission_bundle_v1.0_sip_v1.0_DATE_label.xml INFO 🎉 That's it! Thanks for making an AIP and SIP with us today. Bye! </pre>
Comments	Results met success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	DEEP.3
Description	SIP manifest table erroneously includes secondary collections and their basic products
Issue ID	pds-deep-archive_92
Success Criteria	The Deep Archive software is not supposed to include collections and basic products with secondary membership in the SIP manifest table.
Test Steps	<ol style="list-style-type: none"> 1. cd /home/gxchen/pds-test/PDS4test.build11.1/ 2. verify bundle_insight_spice_v002.xml has Primary and Secondary member status 3. run pds-deep-archive -b https://naif.jpl.nasa.gov/pub/naif/pds/pds4/insight/ -s PDS_NAI insight_spice/bundle_insight_spice_v001.xml -d 4. egrep "kernels" insight.spice_v2.0_20210521_sip_v1.0.tab 5. egrep "document" insight.spice_v2.0_20210521_sip_v1.0.tab
Test Results	<p>Step 2:</p> <pre> <Bundle_Member_Entry> <lidvid_reference>urn:nasa:pds:insight.spice:spice_kernels::2.0</lidvid_reference> <member_status>Primary</member_status> <reference_type>bundle_has_spice_kernel_collection</reference_type> </Bundle_Member_Entry> <Bundle_Member_Entry> <lidvid_reference>urn:nasa:pds:insight.spice:document::1.0</lidvid_reference> <member_status>Secondary</member_status> <reference_type>bundle_has_document_collection</reference_type> </Bundle_Member_Entry> </pre> <p>Step 3:</p> <pre> INFO 📁 PDS Deep Archive, version 1.0.0 INFO 🚀 Starting AIP generation for insight_spice/bundle_insight_spice_v002.xml INFO 🎉 Success! AIP done, files generated: </pre>

```

INFO 📄 Checksum manifest:
insight.spice_v2.0_20210521_checksum_manifest_v1.0.tab
INFO 📄 Transfer manifest:
insight.spice_v2.0_20210521_transfer_manifest_v1.0.tab
INFO 📄 XML label for them both:
insight.spice_v2.0_20210521_aip_v1.0.xml
INFO 🚶 Starting SIP generation for
insight_spice/bundle_insight_spice_v002.xml
INFO 🎉 Success! From /home/gxchen/pds-
test/PDS4test.build11.1/test-
bundles/insight_spice/bundle_insight_spice_v002.xml, generated
these output files:
INFO 📄 SIP Manifest: insight.spice_v2.0_20210521_sip_v1.0.tab
INFO 📄 XML label for the SIP:
insight.spice_v2.0_20210521_sip_v1.0.xml
INFO 🙌 That's it for now. Bye.

Step 4:
04a41697b1da2628d807544eeee9616e MD5
    https://naif.jpl.nasa.gov/pub/naif/pds/pds4/insight/insigh
t_spice/spice_kernels/ck/insight_ida_enc_190331_190629_v1.bc
        urn:nasa:pds:insight.spice:spice_kernels:ck_insight_ida_en
c_190331_190629_v1.bc::1.0
a71cf6d15252ff14b5ae8ea072ef288b MD5
    https://naif.jpl.nasa.gov/pub/naif/pds/pds4/insight/insigh
t_spice/spice_kernels/ck/insight_ida_enc_190331_190629_v1.xml
        urn:nasa:pds:insight.spice:spice_kernels:ck_insight_ida_en
c_190331_190629_v1.bc::1.0
59b3cb53e55a3215f47084583cce6188 MD5
    https://naif.jpl.nasa.gov/pub/naif/pds/pds4/insight/insigh
t_spice/spice_kernels/ck/insight_ida_pot_190331_190629_v1.bc
        urn:nasa:pds:insight.spice:spice_kernels:ck_insight_ida_po
t_190331_190629_v1.bc::1.0
1c4e5081b8830417908268dcf49054e3 MD5
    https://naif.jpl.nasa.gov/pub/naif/pds/pds4/insight/insigh
t_spice/spice_kernels/ck/insight_ida_pot_190331_190629_v1.xml
        urn:nasa:pds:insight.spice:spice_kernels:ck_insight_ida_po
t_190331_190629_v1.bc::1.0
6dc3e284dc03b203ba23d678fd8b6fd7 MD5
    https://naif.jpl.nasa.gov/pub/naif/pds/pds4/insight/insigh
t_spice/spice_kernels/collection_spice_kernels_inventory_v002.c
sv        urn:nasa:pds:insight.spice:spice_kernels::2.0
5b14b4a61c9ad02e9e24e5dd701ef5fa MD5
    https://naif.jpl.nasa.gov/pub/naif/pds/pds4/insight/insigh
t_spice/spice_kernels/collection_spice_kernels_v002.xml
        urn:nasa:pds:insight.spice:spice_kernels::2.0
edf6baebc789eda163fcfad0291e9ac6 MD5
    https://naif.jpl.nasa.gov/pub/naif/pds/pds4/insight/insigh
t_spice/spice_kernels/mk/insight_v02.tm
        urn:nasa:pds:insight.spice:spice_kernels:mk_insight::2.0

```

	<pre> 8601ee824e5e420bb75f000c46840264 MD5 https://naif.jpl.nasa.gov/pub/naif/pds/pds4/insight/insight_spice/spice_kernels/mk/insight_v02.xml urn:nasa:pdo:insight.spice:spice_kernels:mk_insight::2.0 53f6b0483ad05dd5d44e5415d4fc1eca MD5 https://naif.jpl.nasa.gov/pub/naif/pds/pds4/insight/insight_spice/spice_kernels/sclk/nsy_sclkscet_00014.tsc urn:nasa:pdo:insight.spice:spice_kernels:sclk_nsy_sclkscet_00014.tsc::1.0 742e904750a932a914282c13236c8d36 MD5 https://naif.jpl.nasa.gov/pub/naif/pds/pds4/insight/insight_spice/spice_kernels/sclk/nsy_sclkscet_00014.xml urn:nasa:pdo:insight.spice:spice_kernels:sclk_nsy_sclkscet_00014.tsc::1.0 Step 5: No result. </pre>
Comments	Results met success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	DEEP.4
Description	aip_label_checksum is not for the correct file
Issue ID	pds-deep-archive_99
Success Criteria	Check sum in In the SIP xml file matches md5sum of aip_v1.0.xml file
Test Steps	<p>Step 1: run pds-deep-archive -b https://naif.jpl.nasa.gov/pub/naif/pds/pds4/insight/ -s PDS_NAI insight_spice/bundle_insight_spice_v001.xml</p> <p>Step 2: egrep "checksum" insight.spice_v2.0_20210521_sip_v1.0.xml</p> <p>Step 3: md5sum insight.spice_v2.0_20210521 *</p>
Test Results	<p>Step 2: <!--MD5 digest checksum for the manifest file--></p> <p><aip_label_checksum>50025f870bdb6630ef476923f908045f</aip_label_checksum></p> <p>Step 3 50025f870bdb6630ef476923f908045f insight.spice_v2.0_20210521_aip_v1.0.xml</p>
Comments	Results met success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	DEEP.5
Description	add year to directory path in URL
Issue ID	pds-deep-archive_93

Success Criteria	change the base URL to https://pds.nasa.gov/data/pds4/manifests/<year> where <year> is the year the SIP was generated																		
Test Steps	<p>Step 1: run pds-deep-archive -b https://naif.jpl.nasa.gov/pub/naif/pds/pds4/insight/ -s PDS_NAI insight_spice/bundle_insight_spice_v001.xml</p> <p>Step 2: egrep "manifest_url" insight.spice_v2.0 20210521 *</p>																		
Test Results	<p>Step 2:</p> <p style="color: pink;">insight.spice_v2.0_20210521_sip_v1.0.xml:</p> <p style="color: blue;"><u><manifest_url></u><a 355="" 666"="" 80="" 912="" data-label="Table" href="https://pds.nasa.gov/data/pds4/manifests/2021/insight.spice_v2.0_20210521_sip_v1.0.tab<u></manifest_url></u></p> </td></tr> <tr> <td>Comments</td><td>Results met success criteria</td></tr> <tr> <td>Date of Testing</td><td>2021.05.20</td></tr> <tr> <td>Test Personnel</td><td>Gary Chen</td></tr> </table> </div> <div data-bbox="> <table border="1"> <tr> <td>Test Case ID</td><td>DEEP.6</td></tr> <tr> <td>Description</td><td>Bash required for default installation description</td></tr> <tr> <td>Issue ID</td><td>pds-deep-archive_95</td></tr> <tr> <td>Success Criteria</td><td>make clear in the examples that they are using the bash shell version for the Linux/Mac installation and mention that there are alternatives.</td></tr> <tr> <td>Test Steps</td><td> <p>Step 1: Read installation document at: https://nasa-pds.github.io/pds-deep-archive/installation/index.html</p> </td></tr> <tr> <td>Test Results</td><td> <p>Step 1:</p> <pre># For Linux / Mac / other Unix systems # Example assumes bash command shell. For others, consult shell documentation.</pre> </td></tr> <tr> <td>Comments</td><td>Results met success criteria</td></tr> <tr> <td>Date of Testing</td><td>2021.05.20</td></tr> <tr> <td>Test Personnel</td><td>Gary Chen</td></tr> </table> </p>	Test Case ID	DEEP.6	Description	Bash required for default installation description	Issue ID	pds-deep-archive_95	Success Criteria	make clear in the examples that they are using the bash shell version for the Linux/Mac installation and mention that there are alternatives.	Test Steps	<p>Step 1: Read installation document at: https://nasa-pds.github.io/pds-deep-archive/installation/index.html</p>	Test Results	<p>Step 1:</p> <pre># For Linux / Mac / other Unix systems # Example assumes bash command shell. For others, consult shell documentation.</pre>	Comments	Results met success criteria	Date of Testing	2021.05.20	Test Personnel	Gary Chen
Test Case ID	DEEP.6																		
Description	Bash required for default installation description																		
Issue ID	pds-deep-archive_95																		
Success Criteria	make clear in the examples that they are using the bash shell version for the Linux/Mac installation and mention that there are alternatives.																		
Test Steps	<p>Step 1: Read installation document at: https://nasa-pds.github.io/pds-deep-archive/installation/index.html</p>																		
Test Results	<p>Step 1:</p> <pre># For Linux / Mac / other Unix systems # Example assumes bash command shell. For others, consult shell documentation.</pre>																		
Comments	Results met success criteria																		
Date of Testing	2021.05.20																		
Test Personnel	Gary Chen																		

Test Case ID	DEEP.7
Description	As a user, I want the SIP manifest to include valid URLs
Issue ID	pds-deep-archive_102
Success Criteria	Fail if url is invalid
Test Steps	<p>Step 1: pds-deep-archive -s PDS_RNG -b https://rings.anything/xxxx uranus_occ_support/bundle.xml</p>
Test Results	<p>Step 1:</p> <p>NFO 📁 PDS Deep Archive, version 1.0.0 INFO 🚶 Starting AIP generation for uranus_occ_support/bundle.xml</p>

	<p>INFO 🎉 Success! AIP done, files generated:</p> <p>INFO 📄 Checksum manifest: 103ranus_occ_support_v1.0_20210521_checksum_manifest_v1.0.tab</p> <p>INFO 📄 Transfer manifest: 103ranus_occ_support_v1.0_20210521_transfer_manifest_v1.0.tab</p> <p>INFO 📄 XML label for them both: 103ranus_occ_support_v1.0_20210521_aip_v1.0.xml</p> <p>INFO 🚀 Starting SIP generation for 103ranus_occ_support/bundle.xml</p> <p>INFO 💣 I encountered an error while attempting to validate a URL!</p> <p>INFO 🌐 The URL that didn't work: «https://rings.anything/xxxx/103ranus_occ_support/bundle.xml»</p> <p>INFO 📖 The reason it didn't work is: «[Errno -2] Name or service not known»</p> <p>INFO 🧑 This probably means that the bundle base URL is incorrect. You might want to check that!</p> <p>INFO 🤔 If you'd like the full stack trace, re-run with the ``--debug`` option.</p> <p>CRITICAL 💬 Cannot proceed as a critical problem has occurred; re-run with --debug for more info.</p> <p>INFO 🙋 That's it for now. Bye.</p>
Comments	Results met success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	DOI.1
Description	Installation and Regression Test
Issue ID	
Success Criteria	Deep-doi-service successfully install and runs previous testing.
Test Steps	<p>Follow install instructions in https://nasa-pds.github.io/pds-doi-service/installation/index.html</p> <p>Step 1: <pre>python3 -m venv \$HOME/.virtualenvs/pds-doi-service source \$HOME/.virtualenvs/pds-doi-service/bin/activate pip3 install pds-doi-service</pre> </p> <p>Step 2: <pre>which pds-doi-cmd pds-doi-cmd --help</pre> </p>
Test Results	<p>Step 2: <pre>~/.virtualenvs/pds-doi-service/bin/pds-doi-cmd</pre> </p> <p>usage: pds-doi-cmd [-h] {reserve,draft,release,check,list} ...</p> <p>PDS core command for DOI management. The available subcommands are: reserve (Create or update a DOI before the data is published),</p>

	<p>draft (Prepare an OSTI record from PDS4 labels), release (create or update a DOI on OSTI server), check (Check DOI pending status at OSTI and update the local database. Should be run regularly, for example in a crontab.), list (extract doi descriptions with criteria),</p> <p>positional arguments: {reserve,draft,release,check,list}</p> <p>optional arguments: <code>-h, --help</code> show this help message and exit</p>
Comments	Results met success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	DOI.2
Description	Raise a specific exception when the OSTI server is not reachable
Issue ID	pds-doi-service_119
Success Criteria	A message should clearly say that the OSTI server is not reachable.
Test Steps	<p>Step 1: Disconnect macbook from jpl vpn. <code>Python -c "import sys;print(sys.prefix)"</code></p> <p>Step 2: <code>cd testdoi</code> <code>pds-doi-cmd reserve -n eng -i doi5.xlsx -s"gchen@jpl.nasa.gov"</code></p>
Test Results	<p>Step 2: Traceback (most recent call last): <code>File "/Users/gchen/pds/pds-doi-service/venv/bin/pds-doi-cmd", line 8, in <module> sys.exit(main()) File "/Users/gchen/pds/pds-doi-service/venv/lib/python3.8/site-packages/pds_doi_service/core/cmd/pds_doi_cmd.py", line 39, in main output = action.run() File "/Users/gchen/pds/pds-doi-service/venv/lib/python3.8/site-packages/pds_doi_service/core/actions/reserve.py", line 244, in run raise CriticalDOIException(err) pds_doi_service.core.input.exceptions.CriticalDOIException: DOI submission request to OSTI service failed, reason: 401 Client Error: for url: https://www.osti.gov/iad2test/api/records</code></p>
Comments	Results met success criteria

Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	DOI.3
Description	the sqllite database should be created at the same location, wherever the command are launched from
Issue ID	pds-doi-service_122
Success Criteria	The doi.db file should be in the pds-doi-service dorectory.
Test Steps	<p>Step 1: cd testdoi pds-doi-cmd reserve -n eng -i doi5.csv -s"gchen@jpl.nasa.gov"</p> <p>Step 2: Ensure we're working out of \$HOME/.virtualenvs/pds-poi-service: python -c "import sys;print(sys.prefix)"</p> <p>Step 3: Ensure the doi.db file is in the directory specified in Step 2. L1 /home/gxchen/.virtualenvs/pds-doi-service/</p>
Test Results	<p>Step 2: /home/gxchen/.virtualenvs/pds-doi-service</p> <p>Step 3: drwxr-xr-x 3 gxchen pds 4096 May 24 09:54 bin -rw-r--r-- 1 gxchen pds 2048 May 26 21:13 doi.db</p>
Comments	Results met success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	DOI.4
Description	command pds-doi-cmd list returns update date in timestamp instead of iso8601
Issue ID	pds-doi-service_128
Success Criteria	The update date format must be ISO8601.
Test Steps	<p>Step 1: cd testdoi pds-doi-cmd reserve -n eng -i doi5.csv -s"gchen@jpl.nasa.gov"</p> <p>Step 2: pds-doi-cmd list</p>
Test Results	<p>Step 2: "update_date": "2021-05-26T21:13:55.564702+08:00"</p>
Comments	Results met success criteria
Date of Testing	2021.05.20

Test Personnel	Gary Chen
Test Case ID	DOI.5
Description	xlsx file extension for reserve not supported
Issue ID	pds-doi-service_138, pds-doi-ui_1
Success Criteria	Be able to reserve using a xlsx file.
Test Steps	<p>Step 1: Create a doi6.xlsx file in testDoi</p> <p>Step 2: pds-doi-cmd reserve -n eng -i doi6.xlsx -s"gchen@jpl.nasa.gov"</p> <p>Step 3: pds-doi-cmd list</p> <p>Step 4: Use pds-doi-ui to reserve the form.</p>
Test Results	<p>Step 2:</p> <pre>[{ "status": "reserved", "id": "1522556", "title": "Lunar Crustal Magnetic Field Map 20210529 Bundle", "doi": "10.17189/1522556", "sponsoring_organization": "National Aeronautics and Space Administration (NASA)", "accession_number": "urn:nasa:pds:test20210529", "publisher": "NASA Planetary Data System", "availability": "NASA Planetary Data System", "publication_date": "2021-05-29", "country": "US", "site_url": "N/A", "product_type": "Collection", "product_type_specific": "PDS4 Bundle", "date_record_added": "2021-05-29", "date_record_updated": "2021-05-29", "keywords": "", "authors": [{ "first_name": "Gary", "last_name": "Chen", "affiliations": [] }], "contributors": [{ "full_name": "Planetary Data System: Engineering Node", "contributor_type": "DataCurator" }], "contact_name": "PDS Operator", "version": "1.0" }]</pre>

	<pre> "contact_org": "PDS", "contact_email": "pds-operator@jpl.nasa.gov", "contact_phone": "818.393.7165" }] Step 3: { "status": "reserved", "update_date": "2021-05-29T16:23:15.290972+08:00", "submitter": "gary.x.chen@jpl.nasa.gov", "title": "Lunar Crustal Magnetic Field Map 20210529 Bundle", "type": "Collection", "subtype": "PDS4 Bundle", "node_id": "eng", "lid": "urn:nasa:pds:test20210529", "vid": null, "doi": "10.17189/1522556", "release_date": "2021-05-29T16:23:15.290972+08:00", "transaction_key": "/Users/gchen/pds/virtualenvs/pds-doi-service/transaction_history/eng/2021-05-29T16:23:15.294365", "is_latest": 1 } Step 4: Successfully reserve using pds-doi-ui. </pre>
Comments	Results met success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	DOI.5-2
Description	xlsx file extension for reserve not supported GET /dois must support empty vid field
Issue ID	pds-doi-service_138, pds-doi-service_121, pds-doi-service_126
Success Criteria	Be able to reserve using a xlsx file.
Test Steps	<p>Step 1: Create a doi6.xlsx file in testDoi with empty vid</p> <p>Step 2: pds-doi-cmd reserve -n eng -i doi6.xlsx -s"gchen@jpl.nasa.gov"</p> <p>Step 3: pds-doi-cmd list</p>
Test Results	<p>Step 2:</p> <pre> [{ "status": "reserved", "id": "1522556", "title": "Lunar Crustal Magnetic Field Map 20210529 Bundle", "doi": "10.17189/1522556", "sponsoring_organization": "National Aeronautics and Space Administration (NASA)", "acquisition_number": "urn:nasa:pds:test20210529", "publisher": "NASA Planetary Data System", "availability": "NASA Planetary Data System", "publication_date": "2021-05-29", "country": "US", "site_url": "N/A", "product_type": "Collection", "product_type_specific": "PDS4 Bundle", }] </pre>

	<pre> "date_record_added": "2021-05-29", "date_record_updated": "2021-05-29", "keywords": "", "authors": [{ "first_name": "Gary", "last_name": "Chen", "affiliations": [] }], "contributors": [{ "full_name": "Planetary Data System: Engineering Node", "contributor_type": "DataCurator" }], "contact_name": "PDS Operator", "contact_org": "PDS", "contact_email": "pds-operator@jpl.nasa.gov", "contact_phone": "818.393.7165" }] Step 3: { "status": "reserved", "update_date": "2021-05-29T16:23:15.290972+08:00", "submitter": "gary.x.chen@jpl.nasa.gov", "title": "Lunar Crustal Magnetic Field Map 20210529 Bundle", "type": "Collection", "subtype": "PDS4 Bundle", "node_id": "eng", "lid": "urn:nasa:pds:test20210529", "vid": null, "doi": "10.17189/1522556", "release_date": "2021-05-29T16:23:15.290972+08:00", "transaction_key": "/Users/gchen/pds/.virtualenvs/pds-doi-service/transaction_history/eng/2021-05-29T16:23:15.294365", "is_latest": 1 } </pre>
Comments	Results met success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	DOI.6
Description	api does not ignore '/' at the end of url
Issue ID	pds-doi-service_141
Success Criteria	Should not get 404 when getting from http://localhost:8080/PDS_APIs/pds_doi_api/0.1/dois/
Test Steps	<p>Step 1: Create a doi6.xlsx file in testDoi with empty vid</p> <p>Step 2: pds-doi-cmd reserve -n eng -i doi6.xlsx -s"gchen@jpl.nasa.gov"</p> <p>Step 3: Load http://localhost:8080/PDS_APIs/pds_doi_api/0.1/dois/</p>
Test Results	<p>Step 3: Page loaded with 3 responses</p>

Comments	Results met success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	DOI.7
Description	when doing draft with warnings (e.g. duplicated title) the -f option does not help
Issue ID	pds-doi-service_150
Success Criteria	Draft should be successful
Test Steps	<p>Step 1: Download test file from github https://github.com/NASA-PDS/pds-doi-service/files/5922286/test143.zip</p> <p>Step 2: pds-doi-cmd draft -i test143/bundle_in_with_contributors.xml -s gxchen@jpl.nasa.gov -n eng -f</p>
Test Results	<p>Step 2:</p> <pre>DEBUG:pds_doi_service.core.db.doi_database:INSERT o_query_string: INSERT INTO doi (status,type,subtype,is_latest,lid,vid,doi,submitter,update_date,node_id,title,transaction_key) VALUES (?,?,?,?,?,?,?,?,?,?)</pre> <p><records></p> <p><record status="draft"></p> <p><id/></p> <p><title>InSight Cameras Bundle5</title></p> <p><sponsoring_organization>National Aeronautics and Space Administration (NASA)</sponsoring_organization></p> <p><accession_number>urn:nasa:pds:insight_cameras::3.0</accession_number></p> <p><publisher>NASA Planetary Data System</publisher></p> <p><availability>NASA Planetary Data System</availability></p> <p><publication_date>2019-01-01</publication_date></p> <p><country>US</country></p> <p><description>InSight Cameras Experiment Data Record (EDR) and Reduced Data Record (RDR) Data Products</description></p> <p><site_url>https://pds.nasa.gov/ds-view/pds/viewBundle.jsp?identifier=urn%3Anasa%3Apds%3Ainsight_cameras&version=3.0</site_url></p> <p><product_type>Dataset</product_type></p> <p><product_type_specific>PDS4 Refereed Data Bundle</product_type_specific></p> <p><date_record_added>2021-05-30</date_record_added></p> <p><keywords>PDS;PDS4;camera;context;data;deployment;edr;engineering;experiment;insight;lander;mars;product;raw;rdr;record;reduced;science</keywords></p> <p><authors></p> <p><author></p> <p><last_name>Deen</last_name></p> <p><first_name>R.</first_name></p> <p></author></p> <p><author></p>

	<pre> <last_name>Abarca</last_name> <first_name>H.</first_name> </author> <author> <last_name>Zamani</last_name> <first_name>P.</first_name> </author> <author> <last_name>Maki</last_name> <first_name>J.</first_name> </author> </authors> <contributors> <contributor> <email/> <last_name>Smith</last_name> <first_name>P. H.</first_name> <contributor_type>Editor</contributor_type> <affiliations/> </contributor> <contributor> <email/> <last_name>Lemmon</last_name> <first_name>M.</first_name> <contributor_type>Editor</contributor_type> <affiliations/> </contributor> <contributor> <email/> <last_name>Beebe</last_name> <first_name>R. F.</first_name> <contributor_type>Editor</contributor_type> <affiliations/> </contributor> <contributor> <full_name>Planetary Data System: Engineering Node</full_name> <contributor_type>DataCurator</contributor_type> </contributor> </contributors> <contact_name>PDS Operator</contact_name> <contact_org>PDS</contact_org> <contact_email>pds-operator@jpl.nasa.gov</contact_email> <contact_phone>818.393.7165</contact_phone> </record> </records></pre>
Comments	Results met success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	DOI.8
Description	when release command keywords are broken with encoded characters
Issue ID	pds-doi-service_143
Success Criteria	The keyword should stay as they were in input. <keywords>PDS;PDS4;camera;context;data;deployment;edr;engineering;experiment;insight;lander;mars;product;raw;rdr;record;reduced;science</keywords>
Test Steps	<p>Step 1: Create draft with command pds-doi-cmd draft -i test143/bundle_in_with_contributors.xml -s gxchen@jpl.nasa.gov -n eng >/tmp/doi.xml</p> <p>Step 2: use result in stdout to release with following command: pds-doi-cmd release -i /tmp/doi.xml -s gxchen@jpl.nasa.gov -n eng</p> <p>Step 3: Inspect the output keywords</p>
Test Results	<p>Step 3: “keywords”: “PDS;PDS4;camera;context;data;deployment;edr;engineering;experiment;insight;lander;mars; product;raw;rdr;record;reduced;science”</p>
Comments	Results met success criteria
Date of Testing	2021.05.20
Test Personnel	Gary Chen

Test Case ID	DOI.9
Description	draft OSTI label
Issue ID	pds-doi-service_154
Success Criteria	The command should work without error
Test Steps	<p>Step 1: Download test file from: https://github.com/NASA-PDS/pds-doi-service/files/6025511/toto.xml.zip</p> <p>Step 2: Validate test file</p> <p>Step 3: Fix test file</p> <p>Step 4: Create draft with command pds-doi-cmd draft -i toto.xml -s gxchen@jpl.nasa.gov -n eng</p>
Test Results	<p>Step 2: PDS Validate Tool Report</p> <p>Configuration: Version 2.0.3</p>

	Date 2021-05-30T17:43:58Z
Parameters:	
Targets [file:/home/gxchen/pds-test/PDS4test.build11.1/testDoi/toto.xml]	
User Specified Schemas [file:/home/gxchen/pds-test/PDS4test.build11.1/testDoi/postdraft.xsd]	
User Specified Schematrons [file:/home/gxchen/pds-test/PDS4test.build11.1/testDoi/postdraft.sch]	
Severity Level WARNING	
Recurse Directories true	
File Filters Used [* .xml, *.XML]	
Data Content Validation on	
Product Level Validation on	
Max Errors 100000	
Registered Contexts File /home/gxchen/pds-test/validate/resources/registered_context_products.json	
Product Level Validation Results	
FAIL: file:/home/gxchen/pds-test/PDS4test.build11.1/testDoi/toto.xml	
ERROR [error.label.schema] line 3, 41: cvc-complex-type.3.2.2: Attribute 'index' is not allowed to appear in element 'record'.	
ERROR [error.label.schema] line 5, 20: cvc-complex-type.2.4.a: Invalid content was found starting with element 'site_code'. One of '{title}' is expected.	
ERROR [error.label.schema] line 21, 28: cvc-complex-type.2.4.a: Invalid content was found starting with element 'last_name'. One of '{middle_name, affiliations}' is expected.	
ERROR [error.label.schema] line 32, 31: cvc-complex-type.2.4.b: The content of element 'related_identifiers' is not complete. One of '{related_identifier}' is expected.	
WARNING [warning.label.missing_schematron_spec] No schematron specification found in the label.	
1 product validation(s) completed	
Summary:	
2020 error(s)	
1 warning(s)	
Product Validation Summary:	
2020 product(s) passed	
2020 product(s) failed	
2020 product(s) skipped	
Referential Integrity Check Summary:	
2020 check(s) passed	
2020 check(s) failed	
2020 check(s) skipped	
Message Types:	
2020 error.label.schema	

2020warning.label.missing_schematron_spec

End of Report

Completed execution in 11761 ms

Step 3:
PDS Validate Tool Report

Configuration:

Version 2.0.3
Date 2021-05-30T17:56:54Z

Parameters:

Targets [file:/home/gxchen/pds-test/PDS4test.build11.1/testDoi/toto.xml]
User Specified Schemas [file:/home/gxchen/pds-test/PDS4test.build11.1/testDoi/postdraft.xsd]
User Specified Schematrons [file:/home/gxchen/pds-test/PDS4test.build11.1/testDoi/postdraft.sch]
Severity Level WARNING
Recurse Directories true
File Filters Used [* .xml, *.XML]
Data Content Validation on
Product Level Validation on
Max Errors 100000
Registered Contexts File /home/gxchen/pds-test/validate/resources/registered_context_products.json

Product Level Validation Results

PASS: file:/home/gxchen/pds-test/PDS4test.build11.1/testDoi/toto.xml

WARNING [warning.label.missing_schematron_spec] No schematron specification found in the label.

1 product validation(s) completed

Summary:

0 error(s)
1 warning(s)

Product Validation Summary:

2020product(s) passed
2020product(s) failed
2020product(s) skipped

Referential Integrity Check Summary:

2020check(s) passed
2020check(s) failed
2020check(s) skipped

	<p>Message Types: 2020warning.label.missing_schematron_spec</p> <p>End of Report Completed execution in 7626 ms</p> <p>Step 4:</p> <pre>DEBUG:pds_doi_service.core.db.doi_database:INSERT o_query_string: INSERT INTO doi (status,type,subtype,is_latest,lid,vid,doi,submitter,update_date,node_id,title,transaction_key) VALUES (?,?,?,?,?,?,?,?,?,?,?,?)</pre> <p><records></p> <p><record status="draft"></p> <p><id>29052</id></p> <p><title>Laboratory Shocked Feldspars Collection #1</title></p> <p><sponsoring_organization>National Aeronautics and Space Administration (NASA)</sponsoring_organization></p> <p><accession_number>100::1.0</accession_number></p> <p><publisher>NASA Planetary Data System</publisher></p> <p><availability>NASA Planetary Data System</availability></p> <p><publication_date>2020-03-11</publication_date></p> <p><country>US</country></p> <p><site_url>N/A</site_url></p> <p><product_type>Collection</product_type></p> <p><product_type_specific>PDS4 Collection</product_type_specific></p> <p><date_record_added>2021-01-11</date_record_added></p> <p><keywords>; Apsides; PDS4;PDS;PDS4;engineering</keywords></p> <p><authors></p> <p><author></p> <p><last_name>Johnson</last_name></p> <p><first_name>J. R.</first_name></p> <p></author></p> <p></authors></p> <p><contributors></p> <p><contributor></p> <p><full_name>Planetary Data System: Engineering Node</full_name></p> <p><contributor_type>DataCurator</contributor_type></p> <p></contributor></p> <p></contributors></p> <p><contact_name>PDS Operator</contact_name></p> <p><contact_org>PDS</contact_org></p> <p><contact_email>pds-operator@jpl.nasa.gov</contact_email></p> <p><contact_phone>818.393.7165</contact_phone></p> <p></record></p> <p></records></p>
Comments	Results met success criteria
Date of Testing	2021.06.01
Test Personnel	Gary Chen

Test Case ID	DOI.10
Description	API Implementation for DOI Service
Issue ID	pds-doi-service_52
Success Criteria	The pds-doi-service should propose a restful server to activate the management of DOIs are described in the requirements.
Test Steps	Tested in installation. Launch http://localhost:8080/PDS_APIs/pds_doi_api/0.1/ui/#/dois
Test Results	Success
Comments	Results met success criteria
Date of Testing	2021.06.01
Test Personnel	Gary Chen

Test Case ID	DOI.11
Description	Update submission to OSTI to handle the removal of a field from the OSTI metadata
Issue ID	pds-doi-service_140
Success Criteria	Authors are removed from the reserved doi
Test Steps	Step 1: Create a json file with [{ "id":1519385, "contributors":[] }] Id is the id of the reserved doi. Step 2: Post the json file
Test Results	Fail to get any respond from the doi api.
Comments	Results does not met success criteria
Date of Testing	2021.06.01
Test Personnel	Gary Chen

Test Case ID	DOI.12
Description	Draft action: read the doi from the pds4 label
Issue ID	pds-doi-service_114
Success Criteria	A DOI can be updated directly from its PDS4 label when the label contains the DOI identifier.
Test Steps	Step 1: ds-doi-cmd draft -i https://pds.nasa.gov/data/pds4/test-bundles/urn-nasa-pds-insight_documents/bundle_insight_documents.xml -s gxchen@jpl.nasa.gov -n eng Step 2: ds-doi-cmd draft -i https://pds.nasa.gov/data/pds4/test-bundles/urn-nasa-pds-insight_documents/bundle_insight_documents.xml -s gxchen@jpl.nasa.gov -n eng -f
Test Results	Step 1:

	<p>“pds_doi_service.core.input.exceptions.WarningDOIException: TitleDoesNotMatchProductTypeException : DOI with lidvid ‘urn:nasa:fps:insight_documents::2.0’ title ‘Mars InSight Lander Document Archive’ does not contains product specific type suffix ‘bundle’. Product specific type suffix should be in the title.”</p> <p>Step 2:</p> <pre><records> <record status="draft"> <id>1517566</id> <title>Mars InSight Lander Document Archive</title> <sponsoring_organization>National Aeronautics and Space Administration (NASA)</sponsoring_organization> <accession_number>urn:nasa:fps:insight_documents::2.0</accession_number> <publisher>NASA Planetary Data System</publisher> <availability>NASA Planetary Data System</availability> <publication_date>2019-05-22</publication_date> <country>US</country> <description>The Mars InSight Lander document bundle includes a collection of documents for each of the InSight science experiments and a collection of documents pertaining to the mission as a whole.</description></pre> <p>...</p>
Comments	Results met success criteria
Date of Testing	2021.06.01
Test Personnel	Gary Chen

Test Case ID	DOI.13
Description	Extraction of the OSTI XML in /dois?... GET requests
Issue ID	pds-doi-service_116
Success Criteria	When the request a Doi by its lidvid (see https://app.swaggerhub.com/apis/PDS_APIS/pds_doi_api/0.1#/dois/get_doi_from_id) it contains an attribute ‘record’ filled with the XML OSTI record. This value of the XML has special characters escaped as needed.
Test Steps	Post doi request in swagger http://localhost:8080/PDS_APIS/pds_doi_api/0.1/dois?doi=10.17189%2F1522558&node=eng
Test Results	[{ "doi": "10.17189/1522558", "lidvid": "urn:nasa:fps:testrimfax20201202:data_raw::1.0", "node": "eng", "status": "reserved", "submitter": "gary.x.chen@jpl.nasa.gov", "title": "Mars 2020 RIMFAX Raw Data 20201202 Collection", "update_date": "2021-05-30T10:10:00.697502+08:00"

	<pre> }] </pre>
Comments	Results met success criteria
Date of Testing	2021.06.01
Test Personnel	Gary Chen

Test Case ID	DOI.14
Description	Update draft action with new option –lidvid to change from review to draft the status of a DOI
Issue ID	pds-doi-service_134
Success Criteria	Check that the command line tool support the new option and that the option is documented
Test Steps	<p>Step 1: <code>pds-doi-cmd draft -h</code></p> <p>Step 2: https://nasa-pds.github.io/pds-doi-service/usage/index.html</p>
Test Results	<p>Step 1:</p> <pre>usage: pds-doi-cmd draft [-h] [-i input/bundle_in_with_contributors.xml] -n "img" -s "my.email@node.gov" [-l urn:nasa:pds:lab_shocked_feldspars::1.0] [-f] [-k "Image"] [-t osti]</pre> <p>Create a draft of OSTI records, from existing PDS4 or OSTI labels</p> <p>optional arguments:</p> <ul style="list-style-type: none"> -h, --help show this help message and exit -i input/bundle_in_with_contributors.xml, --input input/bundle_in_with_contributors.xml <ul style="list-style-type: none"> An input PDS4/OSTI label. May be a local path or an HTTP address resolving to a label file. Multiple inputs may be provided via comma-delimited list. Must be provided if –lidvid is not specified. -n "img", --node "img" <ul style="list-style-type: none"> The PDS Discipline Node in charge of the DOI. Authorized values are: atm,eng,geo,img,naif,ppi,rms,sbn -s "my.email@node.gov", --submitter "my.email@node.gov" <ul style="list-style-type: none"> The email address to associate with the Draft record. -l urn:nasa:pds:lab_shocked_feldspars::1.0, --lidvid urn:nasa:pds:lab_shocked_feldspars::1.0 <ul style="list-style-type: none"> A LIDVID for an existing DOI record to move back to draft status. Must be provided if –input is not specified.

	<p>-f, --force If provided, forces the action to proceed even if warnings are encountered during submission of the draft record to the database. Without this flag, any warnings encountered are treated as fatal exceptions.</p> <p>-k "Image", --keywords "Image" Extra keywords to associate with the Draft record. Multiple keywords must be separated by ",". Ignored when used with the -lidvid option.</p> <p>-t osti, --target osti The system target to mint the DOI. Currently, only the value "osti" is supported.</p> <p>Step 2: draft</p> <p>Create a draft of OSTI records, from existing PDS4 or OSTI labels</p> <pre>pds-doi-cmd draft [-h] [-i input/bundle_in_with_contributors.xml] -n "img" -s "my.email@node.gov" [-l urn:nasa:pds:lab_shocked_feldspars::1.0] [-f] [-k "Image"] [-t osti]</pre> <p>Named Arguments</p> <p>-i, --input An input PDS4/OSTI label. May be a local path or an HTTP address resolving to a label file. Multiple inputs may be provided via comma-delimited list. Must be provided if -lidvid is not specified.</p> <p>-n, --node The PDS Discipline Node in charge of the DOI. Authorized values are: atm,eng,geo,img,naif,ppi,rms,sbn</p> <p>-s, --submitter The email address to associate with the Draft record.</p> <p>-l, --lidvid A LIDVID for an existing DOI record to move back to draft status. Must be provided if -input is not specified.</p>
Comments	Results met success criteria
Date of Testing	2021.06.01
Test Personnel	Gary Chen

Test Case ID	DOI.15
Description	Update API to deactivate ‘release’ end point, create a ‘submit’ end-point
Issue ID	pds-doi-service_135
Success Criteria	‘release’ end-point does not exist in the API ‘submit’ end-point is available in the API, when used it change the status of the DOI to ‘review’
Test Steps	Step 1: Post a submit to Swagger UI and verify the post string. http://localhost:8080/PDS APIs/pds_doi_api/0.1/dois/urn%3Anasa%3Apds%3Atestrimfax20201202%3Adata_raw%3A%3A1.0/submit?force=true
Test Results	Step 1: <pre>[{ "creation_date": "2021-05-30T10:10:00.697502+08:00", "doi": "10.17189/1522558", "lidvid": "urn:nasa:pds:testrimfax20201202:data_raw::1.0", "node": "eng", "record": "[\n {\n \"status\": \"review\",\n \"id\": \"1522558\",\n \"title\": \"Mars 2020 RIMFAX Raw Data 20201202 Collection\",\n \"doi\": \"10.17189/1522558\",\n \"spatial_scope\": \"National Aeronautics and Space Administration (NASA)\",\n \"accession_number\": \"urn:nasa:pds:testrimfax20201202:data_raw::1.0\",\n \"publisher\": \"NASA Planetary Data System\",\n \"availability\": \"NASA Planetary Data System\",\n \"publication_date\": \"2020-11-11\",\n \"country\": \"US\",\n \"site_url\": \"N/A\",\n \"product_type\": \"Collection\",\n \"product_type_specific\": \"PDS4 Collection\",\n \"date_record_added\": \"2021-05-30\",\n \"date_record_updated\": \"2021-05-30\",\n \"keywords\": \"\",\n \"authors\": [\n {\n \"first_name\": \"Richard\",\n \"last_name\": \"Chen\"\n }\n],\n \"contributors\": [\n {\n \"full_name\": \"Planetary Data System: Engineering Node\"\n }\n],\n \"contributor_type\": \"DataCurator\",\n \"contact_name\": \"PDS Operator\",\n \"contact_org\": \"PDS\",\n \"contact_email\": \"pds-operator@jpl.nasa.gov\",\n \"contact_phone\": \"818.393.7165\"\n }\n]</pre>
Comments	Results met success criteria
Date of Testing	2021.06.01
Test Personnel	

Test Case ID	DOI.17
Description	enable filter by status in sub-action ‘pds-doi-cmd list’
Issue ID	pds-doi-service_144
Success Criteria	The sub-command ‘list’ enable to filter by status.
Test Steps	<p>Step 1: pds-doi-cmd list</p> <p>Step 2: pds-doi-cmd list –status=reserved</p> <p>Step 3: pds-doi-cmd list –status=review</p>
Test Results	<p>Step 1: DEBUG pds_doi_service.core.db.doi_database:select_latest_rows Query returned 6 result(s)</p> <p>...</p> <p>Step 2: DEBUG pds_doi_service.core.db.doi_database:parse_criteria dict_entry: {‘status_0’: ‘reserved’} DEBUG pds_doi_service.core.db.doi_database:select_latest_rows SELECT query_string: SELECT * from doi WHERE is_latest=1 AND lower(status) IN (:status_0) ORDER BY update_date DEBUG pds_doi_service.core.db.doi_database:select_latest_rows Query returned 5 result(s)</p> <p>...</p> <p>Step 3: DEBUG pds_doi_service.core.db.doi_database:parse_criteria dict_entry: {‘status_0’: ‘review’} DEBUG pds_doi_service.core.db.doi_database:select_latest_rows SELECT query_string: SELECT * from doi WHERE is_latest=1 AND lower(status) IN (:status_0) ORDER BY update_date DEBUG pds_doi_service.core.db.doi_database:select_latest_rows Query returned 1 result(s) DEBUG pds_doi_service.core.actions.list:run o_select_result: [{"status": "review", "update_date": "2021-05-30T12:04:29.991422+08:00", "submitter": "gary.x.chen@jpl.nasa.gov", "title": "Mars 2020 RIMFAX Raw Data 20201202 Collection", "type": "Collection", "subtype": "PDS4 Collection", "node_id": "eng", "lid": "urn:nasa:pds:testrimfax20201202:data_raw", "vid": "1.0", "doi": "10.17189/1522558", "release_date": "2021-05-30T10:10:00.697502+08:00", "transaction_key": "/Users/gchen/pds/.virtualenvs/pds-doi-service/transaction_history/eng/2021-05-30T12:04:29.999679", "is_latest": 1}]</p>
Comments	Results met success criteria
Date of Testing	2021.06.01
Test Personnel	Gary Chen

Test Case ID	DOI.18
Description	API POST /dois should accept DOI OSTI format in payload
Issue ID	pds-doi-service_148
Success Criteria	A valid OSTI DOI XML can be posted to the API by using the end point POS /dois.
Test Steps	<p>Step 1: Launch pds-doi-api</p> <p>Step 2: Open http://localhost:8080/PDS_APIs/pds_doi_api/0.1/ui/#/dois/post_dois in browser</p> <p>Step 3: Post a draft http://localhost:8080/PDS_APIs/pds_doi_api/0.1/dois?action=draft&submitter=gxchen%40jpl.nasa.gov&node=eng&url=%2FUsers%2Fgchen%2Fpds%2Fpds4test.build11.1%2FtestDoi%2Fdoi11bun-1.xml&force=true</p>
Test Results	<p>Step 3: Response body</p> <pre>[{ "creation_date": "2021-05-30T22:42:33.846733+08:00", "lidvid": "urn:nasa:pds:testrimfax20210530::1.0", "node": "eng", "record": "<records>\n<record status='draft'>\n<id>\n<title>Mars 2020 RIMFAX 20210530 Bundle</title>\n<sponsoring_organization>National Aeronautics and Space Administration (NASA)</sponsoring_organization>\n<accession_number>urn:nasa:pds:testrimfax20210530::1.0</accession_number>\n<publisher>NASA Planetary Data System</publisher>\n<availability>NASA Planetary Data System</availability>\n<publication_date>2021-05-30</publication_date>\n<country>US</country>\n<description>Mars 2021 Perseverance Rover RIMFAX Raw and Derived Data Products</description>\n<site_url>https://pds.nasa.gov/ds-view/pds/viewBundle.jsp?identifier=urn%3Anasa%3Apds%3Atestrimfax20210530&amp;version=1.0</site_url>\n<product_type>Dataset</product_type>\n<product_type_specific>PDS4 Refereed Data Bundle</product_type_specific>\n<date_record_added>2021-05-30</date_record_added>\n<date_record_updated>2021-05-30</date_record_updated>\n<keywords>2020;2021;PDS;PDS4;data;derived;engineering;experiment;imager;mars;perseverance;product;radar;raw;rimfax;rover;science;subsurface</keywords>\n<authors>\n<author>\n<full_name>Svein Erik Notreally Justtesting Hamran</full_name>\n</author>\n</authors>\n<contributors>\n<contributor>\n<full_name>Planetary Data System: Engineering Node</full_name>\n<contributor_type>DataCurator</contributor_type>\n</contributor>\n</contributors>\n<contact_name>PDS Operator</contact_name>\n<contact_org>PDS</contact_org>\n<contact_email>pds-operator@jpl.nasa.gov</contact_email>\n<contact_phone>818.393.7165</contact_phone>\n</record>\n</records>\n", "status": "draft", }]</pre>

	<pre> "submitter": "gxchen@jpl.nasa.gov", "title": "Mars 2020 RIMFAX 20210530 Bundle", "update_date": "2021-05-30T22:42:33.846733+08:00" }] </pre>
Comments	Results met success criteria
Date of Testing	2021.06.01
Test Personnel	Gary Chen

Test Case ID	DOI.19
Description	When a pds4 label or osti can not be parsed generate error 400 in API
Issue ID	pds-doi-service_157
Success Criteria	The above request must return error 400.
Test Steps	<p>Step 1: Launch pds-doi-api</p> <p>Step 2: Open http://localhost:8080/PDS_APIs/pds_doi_api/0.1/ui/#/dois/post_dois in browser</p> <p>Step 3: Post a draft http://localhost:8080/PDS_APIs/pds_doi_api/0.1/dois?action=draft&submitter=gxchen%40jpl.nasa.gov&node=eng&url=https%3A%2F%2Fpds-geosciences.wustl.edu%2Finsight%2Furn-nasa-pds-insight_rad%2Fdata_calibrated%2Fcollection_data_rad_calibrated.xml&force=false</p>
Test Results	<p>Error: BAD REQUEST 400</p> <p>3.2.1.1 Response body</p> <pre>{ "errors": [{ "message": "Could not parse the provided xml file as a PDS4 label.\nReason: Could not find a value for an expected PS4 label field: 'authors'.\nPlease ensure there is a value present in the label for the following xpath:\n/*[pds4:Identification_Area/pds4:Citation_Information/pds4:author_list]", "name": "InputFormatException" }] }</pre>
Comments	Results met success criteria
Date of Testing	2021.06.01
Test Personnel	Gary Chen

Test Case ID	DOI.20
Description	Add service to API for update of the status of records with OSTI (check sub command)
Issue ID	pds-doi-service_165, pds-doi-service_167
Success Criteria	An API end-point enable to request the check command function which will update a newly released OSTI record from pending to released status (depending on OSTI status).
Test Steps	Step 1: pds-doi-cmd check -s gxchen@jpl.nasa.gov Step 2:
Test Results	NFO pds_doi_service.core.cmd.pds_doi_cmd:main run_dir /Users/gchen/pds/pds4test.build11.1/testDoi INFO pds_doi_core.actions.actions:parse_arguments submitter = gxchen@jpl.nasa.gov INFO pds_doi_core.actions.actions:parse_arguments email = False INFO pds_doi_core.actions.actions:parse_arguments attachment = False INFO pds_doi_service.core.db.doi_database:create_connection Connecting to SQLite3 (ver 2.6.0) database /Users/gchen/pds/.virtualenvs/pds-doi-service/doi.db INFO pds_doi_service.core.db.doi_database:check_if_table_exists Checking for existence of DOI table doi INFO pds_doi_service.core.db.doi_database:check_if_table_exists Executing query: SELECT count(name) FROM sqlite_master WHERE type='table' AND name='doi' DEBUG pds_doi_service.core.db.doi_database:check_if_table_exists o_table_exists_flag: True DEBUG pds_doi_service.core.db.doi_database:parse_criteria Calling get_query_criteria_status with value ['pending'] DEBUG pds_doi_service.core.db.doi_database:parse_criteria criteria_str: AND lower(status) IN (:status_0) DEBUG pds_doi_service.core.db.doi_database:parse_criteria dict_entry: {'status_0': 'pending'} DEBUG pds_doi_service.core.db.doi_database:select_latest_rows SELECT query_string: SELECT * from doi WHERE is_latest=1 AND lower(status) IN (:status_0) ORDER BY update_date DEBUG pds_doi_service.core.db.doi_database:select_latest_rows Query returned 0 result(s) DEBUG pds_doi_service.core.actions.list:run o_select_result: [] INFO pds_doi_service.core.actions.check:run Found 0 DoiStatus.Pending record(s) to check
Comments	Results met success criteria
Date of Testing	2021.06.01
Test Personnel	Gary Chen

Test Case ID	DOI.21
Description	As an API user I want to filter on lidvids with wildcards

Issue ID	pds-doi-service_177
Success Criteria	<p>When I do a GET /dois request with parameter lidvid containing * or ?, anywhere in the string (start, middle, end)</p> <p>Then: I receive the matching DOIs according to the traditional unix wildcard management</p>
Test Steps	<p>Step 1: Get with * in lidvids http://localhost:8080/PDS_APIs/pds_doi_api/0.1/dois?doi=&submitter=gary.x.chen%40jpl.nasa.gov&node=eng&lid=urn%3Anasa%3A%2A&start_date=2020-01-01T19%3A02%3A15&end_date=2021-05-30T23%3A59%3A00</p> <p>Step 2: Get with ? in lidvids http://localhost:8080/PDS_APIs/pds_doi_api/0.1/dois?doi=&submitter=gary.x.chen%40jpl.nasa.gov&node=eng&lid=urn%3Anasa%3Apds%3F&start_date=2020-01-01T19%3A02%3A15&end_date=2021-05-30T23%3A59%3A00</p>
Test Results	<p>Step1:</p> <pre>[{ "doi": "10.17189/1522554", "lidvid": "urn:nasa:pds:test20210512", "node": "eng", "status": "reserved", "submitter": "gary.x.chen@jpl.nasa.gov", "title": "Lunar Crustal Magnetic Field Map 20210501 Bundle", "update_date": "2021-05-29T13:29:00.609161+08:00" }, { "doi": "10.17189/1522555", "lidvid": "urn:nasa:pds:test20210512::1.0", "node": "eng", "status": "reserved", "submitter": "gary.x.chen@jpl.nasa.gov", "title": "Lunar Crustal Magnetic Field Map 20201203 Bundle", "update_date": "2021-05-29T13:31:30.524880+08:00" }, { "doi": "10.17189/1522556", "lidvid": "urn:nasa:pds:test20210529", "node": "eng", "status": "reserved", "submitter": "gary.x.chen@jpl.nasa.gov", "title": "Lunar Crustal Magnetic Field Map 20210529 Bundle", "update_date": "2021-05-29T16:23:15.290972+08:00" }, { "doi": "10.17189/1522557", "lidvid": "urn:nasa:pds:testrimfax20201202::1.0", "node": "eng", "status": "reserved", "submitter": "gary.x.chen@jpl.nasa.gov", "title": "Mars 2020 RIMFAX 20201202 Bundle", "update_date": "2021-05-30T10:10:00.688757+08:00" }]</pre>

```
{
    "doi": "10.17189/1522559",
    "lidvid":
"urn:nasa:pds:testrimfax20201202:document:rimfax_bundle_sis::1.0",
    "node": "eng",
    "status": "reserved",
    "submitter": "gary.x.chen@jpl.nasa.gov",
    "title": "RIMFAX PDS Archive Bundle Software Interface Specification (SIS) 20201202 Document",
    "update_date": "2021-05-30T10:10:00.698038+08:00"
},
{
    "doi": "10.17189/1522558",
    "lidvid": "urn:nasa:pds:testrimfax20201202:data_raw::1.0",
    "node": "eng",
    "status": "review",
    "submitter": "gary.x.chen@jpl.nasa.gov",
    "title": "Mars 2020 RIMFAX Raw Data 20201202 Collection",
    "update_date": "2021-05-30T12:04:29.991422+08:00"
}
]
```

Step 2:

DEBUG:pds_doi_service.core.db.doi_database:dict_entry: {'lid_0': 'urn:nasa:pds?'}
 DEBUG:pds_doi_service.core.db.doi_database:Calling get_query_criteria_submitter with value ['gary.x.chen@jpl.nasa.gov']
 DEBUG:pds_doi_service.core.db.doi_database:criteria_str: AND lower(submitter) IN (:submitter_0)
 DEBUG:pds_doi_service.core.db.doi_database:dict_entry: {'submitter_0': 'gary.x.chen@jpl.nasa.gov'}
 DEBUG:pds_doi_service.core.db.doi_database:Calling get_query_criteria_node with value ['eng']
 DEBUG:pds_doi_service.core.db.doi_database:criteria_str: AND lower(node_id) IN (:node_id_0)
 DEBUG:pds_doi_service.core.db.doi_database:dict_entry: {'node_id_0': 'eng'}
 DEBUG:pds_doi_service.core.db.doi_database:Calling
 get_query_criteria_start_update with value 2020-01-01 19:02:15
 DEBUG:pds_doi_service.core.db.doi_database:criteria_str: AND update_date >= :start_update
 DEBUG:pds_doi_service.core.db.doi_database:dict_entry: {'start_update': 1577905335.0}
 DEBUG:pds_doi_service.core.db.doi_database:Calling
 get_query_criteria_end_update with value 2021-05-30 23:59:00
 DEBUG:pds_doi_service.core.db.doi_database:criteria_str: AND update_date <= :end_update
 DEBUG:pds_doi_service.core.db.doi_database:dict_entry: {'end_update': 1622419140.0}
 DEBUG:pds_doi_service.core.db.doi_database:SELECT query_string: SELECT *
 from doi WHERE is_latest=1 AND (lid IN (:lid_0)) AND lower(submitter) IN
 (:submitter_0) AND lower(node_id) IN (:node_id_0) AND update_date
 >= :start_update AND update_date <= :end_update ORDER BY update_date

	DEBUG:pds_doi_service.core.db.doi_database:Query returned 0 result(s) DEBUG:pds_doi_service.core.actions.list:o_select_result: [] INFO:pds_doi_service.api.controllers.dois_controller:GET /dois request returned 0 result(s)
Comments	Results met partial success criteria, * works, “?” doesn’t.
Date of Testing	2021.06.01
Test Personnel	Gary Chen

Test Case ID	pds-api-client
Description	PDS API Client 1.0.0 cannot communicate with pds-gamma
Issue ID	pds-api-client-2
Success Criteria	PDS API Client talks to pds-gamma
Test Steps	<p>Step 1:</p> <pre>\$ bin/pip install -quiet pds.api_client \$ curl -silent -location -remote-name https://raw.githubusercontent.com/NASA-PDS/pds-api-client/master/client-demo.py \$ bin/python3 client-demo.py</pre>
Test Results	<p>Step1:</p> <pre>{'data': [{'description': None, 'id': 'urn:nasa:pds:insight_documents:document_hp3rad::8.0', 'investigations': [{'description': None, 'href': 'http://pds-gamma.jpl.nasa.gov/products/urn:nasa:pds:context:investigation:mission.insight', 'id': 'urn:nasa:pds:context:investigation:mission.insight', 'title': None, 'type': None}], 'metadata': { 'creation_date_time': '2018-01-19T00:00:00Z', 'label_url': 'https://pds-gamma.jpl.nasa.gov/data/pds4/test-data/registry/urn-nasa-pds-insight_documents/document_hp3rad/collection_document_hp3rad.xml', 'update_date_time': None, 'version': '8.0' }, 'observing_system_components': [{'description': None, 'href': 'http://pds-gamma.jpl.nasa.gov/products/urn:nasa:pds:context:instrument_host:spacecraft.insight' , 'id': 'urn:nasa:pds:context:instrument_host:spacecraft.insight', 'title': None, 'type': None}, { 'description': None,</pre>

	<pre> 'href': 'http://pds- gamma.jpl.nasa.gov/products/urn:nasa:pds:context:instrument:hp3.insight', 'id': 'urn:nasa:pds:context:instrument:hp3.insight', 'title': None, 'type': None}, {'description': None, 'href': 'http://pds- gamma.jpl.nasa.gov/products/urn:nasa:pds:context:instrument:radiometer.insight', 'id': 'urn:nasa:pds:context:instrument:radiometer.insight', 'title': None, 'type': None}], ... </pre>
Comments	Results met success criteria.
Date of Testing	2021.06.01
Test Personnel	Gary Chen

Test Case ID	WDS-1
Description	App Bar causes usability issues on mobile
Issue ID	pds-wds-web-9
Success Criteria	<p>Page should not be wider than its content, and users should not be able to scroll horizontally.</p> <p>Buttons should be approx. 48px wide</p>
Test Steps	<ol style="list-style-type: none"> 1. Go to https://sbn.psi.edu/pds on a mobile device, or using Chrome dev tools on iPhone X 2. Scroll horizontally 3. Note whitespace on the right-hand side
Test Results	Can not scroll horizontally
Comments	Results met success criteria.
Date of Testing	2021.06.01
Test Personnel	Gary Chen

Test Case ID	WDS-2
Description	App Bar causes usability issues on mobile
Issue ID	pds-wds-web-15
Success Criteria	The App Bar does not interfere with any other site functionalities
Test Steps	<ul style="list-style-type: none"> • Visit https://photojournal.jpl.nasa.gov/beta

	<ul style="list-style-type: none"> • Change the value in one of the dropdowns at the top.
Test Results	Web page works properly
Comments	Results met success criteria.
Date of Testing	2021.06.01
Test Personnel	Gary Chen

Test Case ID	WDS-3
Description	Show screenshot of app-bar in README
Issue ID	pds-wds-web-12
Success Criteria	<p>Include screenshot of latest app bar in the README</p> <p>Include numerical annotations explaining different parts of the app bar, and which areas are to be customized and how</p>
Test Steps	<ul style="list-style-type: none"> • Visit https://github.com/NASA-PDS/pds-wds-web/tree/master/app-bar#pds-app-bar
Test Results	No screenshot found in README.
Comments	Results does not met success criteria.
Date of Testing	2021.06.01
Test Personnel	Gary Chen

Test Case ID	WDS-4
Description	App Bar Node List Reordering
Issue ID	pds-wds-web-17
Success Criteria	The "Geosciences" entry should appear after "Cartography and Imaging Sciences".
Test Steps	<ul style="list-style-type: none"> • Visit https://sbn.psi.edu/pds/ <p>Click on “Find a Node” dropdown box.</p>
Test Results	The "Geosciences" entry is appearing after “Cartography and Imaging Sciences”.
Comments	Results met success criteria.
Date of Testing	2021.06.01
Test Personnel	Gary Chen

Test Case ID	MI-LABEL
Description	Windows version will not run because of error in generate.bat
Issue ID	mi-label_10

Success Criteria	generate.bat has the right path for in line 52 "%LIB_DIR%\mi-label-* .jar"
Test Steps	Download mi-label https://github.com/NASA-PDS/mi-label/releases/download/v1.2.0/mi-label-1.2.0-bin.zip open file mi-label-1.2.0\bin\generate.bat for inspection.
Test Results	:: Check for dependencies. if exist "%LIB_DIR%\mi-label-* .jar" (set MILABEL_JAR=%LIB_DIR%\mi-label-* .jar) else (echo Cannot find MILabel Tool jar file in %LIB_DIR% goto END)
Comments	Results met success criteria.
Date of Testing	2021.06.01
Test Personnel	Gary Chen

4 RDD Traceability

The Release Description (RDD) for Build 11.1,

<https://nasa-pds.github.io/releases/11.1/rdd.html>

guides the testing in this document. The RDD lists the issues, as tracked in github, that the software in this build addresses. Anomalies found during testing become github issues, so to avoid duplication of information and effort, this document does not track historical anomalies.

In the table below:

- Column 1: the issue ID, abbreviated from the RDD, used in the test steps above
 “regAp#N” is “pds-registry-app#N” in the RDD
 “hvt#N” : “harvest#N”
 “elas#N” : “pds-registry-mgr-elastic#N”
 “doi#N” : “pds-doi-service#N”
 “deep#N” : “pds-deep-archive#N”
 “val#N” : “validate#N”
 “im#N” : “pds4-information-model”
- Column 2: type of issue.
 I: improvement
 D: defect
 R: requirement
- Column 3: status: “pass”, “skip”, “fail”.
- Column 4: if column 2 is “pass” or “fail”, the test case ID. If “skip”
 “cost”: the value of the test would be minimal, and the effort, large
 “docs”: the issue concerned documentation
 “hidden”: the change was internal to the software with no external manifestation
 “notyet”: the issue is not implemented yet
- Column 5: brief description of the issue

hvt#37	R	fail	docs	Tool package includes default configuration
hvt#41	I	pass	HVT.12	Use directory_path_name to locate //Document_File/file_name
hvt#45	R	pass	HVT.12	Ingest data not in a bundle
pdsapi##*	*	skip	notyet	
regAp#20	I	skip	hidden	Update Schema Generator for special cases where ancestor classes are needed
regAp#27	I	skip	hidden	Manage PDS4 product relationships
regAp#67	R	pass	HVT.10	The service shall require a subset of file system metadata in order to support data metrics generation
regAp#102	I	skip	notyet	Add the API to the pds-registry-app package, with documentation
regAp#103	I	pass	HVT.12	Registry-manager load-data must handle more use cases
regAp#108	D	pass	docs	Missing batch scripts for Windows
regAp#109	D	skip	notyet	Test data in build has invalid PDS4 labels
regAp#110	D	skip	notyet	Test data is missing data products
regAp#111	D	skip	notyet	Make example harvest configuration more explicit
regAp#113	I	skip	hidden	Have pds4 properties syntax match the syntax decided for the PDS API
regAp#123	I	skip	docs	Update registry-mgr documentation as stated in #86

regAp#129	I	skip	docs	Create a registry docker for developer testing
regAp#130	R	pass	HVT.10	Allow harvesting of a subset of a bundle based on existing registered data.
regAp#131	I	pass	HVT.12	Develop ElasticSearch client library to query ElasticSearch registry to avoid duplicates
regAp#135	D	skip	hidden	Docker build is version locked
regAp#141	R	skip	hidden	Create cost model for deploying a registry + API in AWS
regAp#142	R	pass	HVT.12	Provide actionable, user-friendly error messages for registry schema failures
regAp#143	R	pass	HVT.12	Ingest metadata regarding secondary products of a collection
regAp#144	R	pass	HVT.12	Ingest metadata regarding secondary collections
regAp#145	R	pass	HVT.12	Include supplemental file data sizes in the registry
regAp#147	R	pass	HVT.12	Tag ingested data with the node ingesting it
im#167	I	pass	SCMA.15	LDDTool: Use sch:value-of to display a variable in Schematron validation
im#170	D	pass	SCMA.16	LDDTool generates DocBook from only one specific directory
im#175	D	skip	docs	LDDTool displays invalid IMG discipline classes
im#188	D	pass	SCMA.9	LDDTool: requires one class with (element_flag = true)
im#238	I	skip	hidden	Continue refactoring of IMTool/LDDTool
im#241	I	skip	hidden	Improvement from Build 11.0 testing
im#242	I	skip	docs	DocBook HTML/WebHelp generation and conversion processes
im#266	D	pass	SCMA.17	WARN when enumeration_flag = false but enumerations are specified
im#271	D	pass	SCMA.1	LDDTool forces use of LDD versions based upon config
im#277	D	pass	SCMA.1	LDD versionId list in the Data Dictionary doc introduction contains invalid versionIds
im#280	D	pass	SCMA.1	CSV files fail to escape double quotes
im#283	D	pass	SCMA.1	LDDTool-generated LIDs for XML Schema Label products do not contain IM or LDD version IDs
im#293	I	pass	SCMA.1	Update JSON output to include dependencies in output
im#298	I	pass	SCMA.1	Add title to Rule Assertion to allow generation of regression tests
im#301	D	pass	SCMA.18	LDDTool generates incorrect namespace for PSA
im#302	D	pass	SCMA.18	LDDTool does not allow the bundle to be specified for generated dictionaries
im#304	D	pass	SCMA.18	LDDTool does include the PSA namespace
im#312	D	skip	docs	LDDTool does not generate the "All LDD" version of the WebHelp PDS4 Data Dictionary doc
im#316	D	pass	SCMA.19	The 1F00 directory is missing from the Data directory for the 1G00 development release
im#322	D	pass	SCMA.19	LDDTool generates a 1C00 file when -V1B00 is specified
im#324	R	pass	SCMA.20	Inherit a class/attribute defined using DD_Associate_External_Class
im#327	D	skip	hidden	Repo tests fail when trying to run back-to-back maven steps
im#328	D	pass	SCMA.19	LDDTool outputs invalid schema with v13.0.0
im#331	D	pass	SCMA.20	Invalid output schema when trying to set an Internal_Reference reference_type value set
Validate_5	D	pass	VAL.3	Improve file base name check according to Standards Reference
Validate_153	D	pass	VAL.4	Update validate to throw error when a file has a space in the filename
Validate_189	D	pass	VAL.5	Validate error reading tables > 2GiB.
Validate_240	D	Pass	VAL.6	Validate throws an error for unallowed directory name even though it is the base data collection.
Validate_11	D	Pass	VAL.21	Update allowable field_format values per Standards Reference definition regarding [+-] characters

Validate_256	D	Pass	VAL.7	validate should only do integrity checking on latest version of a collection when referenced by LID
Validate_6	D	Pass	VAL.7	Improve pds4.bundle unlabeled files check to handle files without a file suffix
Validate_257	D	Pass	VAL.8	Product with incorrect table binary definition pass validation.
Validate_260	D	fail	VAL.9	Missing documentation about deprecated flags
Validate_271	D	Pass	VAL.10	validate 1.25.0-SNAPSHOT raises an exception when validating a product
Validate_273	D	Pass	VAL.10	Bug performing bundle validation with nested directories.
Validate_278	D	Pass	VAL.11	Registered context products file does not retain older versions of context products.
Validate_281	D	Pass	VAL.12	Validate fails to report error in File.file_size.
Validate_291	D	Pass	VAL.13	When validating a product with a bad schematron definition, bundle validation also fails indicating the associated product does not exist.
Validate_301	D	Pass	VAL.13	unclear error message for field count matching
Validate_294	D	Pass	VAL.14	Content validation incorrectly reports error for floating-point values out of specified min/max range.
Validate_297	D	Pass	VAL.15	Content validation of ASCII_Integer field does not accept value with leading zeroes.
Validate_298	D	Pass	VAL.16	validate misses double quotes within a delimited table.
Validate_299	D	Pass	VAL.17	Validate tool does not PASS a bundle with a single-character filename.
Validate_300	D	Pass	VAL.18	No error message displayed.
Validate_310	D	Pass	VAL.20	Validate missing collections in bundle after CCB-282 updates.
Validate_17	I	Pass	VAL.22	Validate schematron references and throw fatal error if invalid URI specified.
Validate_24	I	Pass	VAL.23	Update context check to retrieve and use latest context products from EN Registry.
Validate_51	I	Pass	VAL.25	Provide the capability to specify multiple locations for pds4.bundle validation.
Validate_81	I	Pass	VAL.26	Validate schematron references and throw fatal error if invalid URI specified.
Validate_230	I	Pass	VAL.27	Update validate per SR Requirements for collection inventories.
Validate_238	I	Pass	VAL.28	validate does not perform full bundle validation when using a specific bundle.xml
Validate_254	I	Pass	VAL.28	validate does not perform expediently when doing bundle-level validation against large bundles
Validate_246	I	Pass	VAL.29	Add output directory flag to validate-bundle tool
Validate_252	I	Skip	hidden	Implement initial behavioral testing framework with cucumber
Validate_290	I	Skip	hidden	Migrate subset of existing regression tests to cucumber behavioral testing
Validate_188	R	Pass	VAL.30	As a user, I want to validate a bundle that uses multiple versions of the Information Model / Discipline LDDs
Validate_264	I	Pass	VAL.31	Update installation documentation to include 64-bit Java as system requirement
Validate_322	R	Pass	VAL.32	Update installation documentation to require Java 1.9+
Validate_210	R	Pass	VAL.33	As a user, I want validate to raise a WARNING when differing versions of IM are used within a bundle
Validate_292	R	Pass	VAL.34	CCB-264: Make the Line Feed (LF) character an allowed record delimiter
Validate_323	R	Skip	hidden	Upgrade to Java 9+
Validate_250		Skip	hidden	Improvements to meet updated Standards Reference since initial requirements implementation
pds-deep-archive_90	D	Pass	DEEP.2	Small typo on package documentation
pds-deep-archive_92	D	Pass	DEEP.3	SIP manifest table erroneously includes secondary collections and their basic products
pds-deep-archive_99	D	Pass	DEEP.4	aip_label_checksum is not for the correct file

pds-deep-archive_93	I	Pass	DEEP.5	add year to directory path in URL
pds-deep-archive_95	I	Pass	DEEP.6	Bash required for default installation
pds-deep-archive_102	R	Pass	DEEP.7	As a user, I want the SIP manifest to include valid URLs
pds-doi-service_119	D	Pass	DOI.2	Raise a specific exception when the OSTI server is not reachable
pds-doi-service_122	D	Pass	DOI.3	the sqlite database should be created at the same location, wherever the command are launched from
pds-doi-service_128	D	Pass	DOI.4	command pds-doi-cmd list returns update date in timestamp instead of iso8601
pds-doi-service_138	D	Pass	DOI.5	xlsx file extension for reserve not supported
pds-doi-service_121	D	Pass	DOI.5-2	GET /dois must support empty vid field
pds-doi-service_126	D	Pass	DOI.5-2	get /dois/{lidvid}
pds-doi-service_138	D	Pass	DOI.5-2	command pds-doi-cmd list returns update date in timestamp instead of iso8601
pds-doi-service_141	D	Pass	DOI.6	api does not ignore ‘/’ at the end of url
pds-doi-service_143	D	Pass	DOI.8	when release command keywords are broken with encoded characters
pds-doi-service_150	D	Pass	DOI.7	when doing draft with warnings (e.g. duplicated title) the -f option does not help
pds-doi-service_154	D	Pass	DOI.9	draft OSTI label
pds-doi-service_159	D	Skip	docs	The url /dois/{lidvid} should still return XML in the record attribute
pds-doi-service_52	I	Pass	DOI.10	API Implementation for DOI Service
pds-doi-service_91	I	Skip	hidden	Develop User Access / Management Strategy
pds-doi-service_114	I	Pass	DOI.12	Draft action: read the doi from the pds4 label
pds-doi-service_116	I	Pass	DOI.13	Extraction of the OSTI XML in /dois?... GET requests
pds-doi-service_125	I	Skip	hidden	Update DOI UI and Service with new workflow for operational deployment
pds-doi-service_134	I	Pass	DOI.14	Update draft action with new option –lidvid to change from review to draft the status of a DOI
pds-doi-service_135	I	Pass	DOI.15	Update API to deactivate ‘release’ end point, create a ‘submit’ end-point
pds-doi-service_140	I	fail	DOI.11	Update submission to OSTI to handle the removal of a field from the OSTI metadata
pds-doi-service_144	I	Pass	DOI.17	enable filter by status in sub-action ‘pds-doi-cmd list’
pds-doi-service_148	I	Pass	DOI.18	API POST /dois should accept DOI OSTI format in payload

pds-doi-service_157	I	Pass	DOI.19	When a pds4 label or osti can not be parsed generate error 400 in API
pds-doi-service_162	I	Skip	hidden	Implement Application Server to wrap Flask service
pds-doi-service_165	I	Pass	DOI.20	Add service to API for update of the status of records with OSTI (check sub command)
pds-doi-service_165	I	Pass	DOI.20	As a user, I want to see the lidvid of my DOIs in the email report
pds-doi-service_177	I	fail	DOI.21	As an API user I want to filter on lidvids with wildcards
Pds-wds-web_9	D	Pass	WDS-1	App Bar causes usability issues on mobile
Pds-wds-web_10	D	Skip	hidden	PDS App Bar does not work if it's included after the DOM loads
pds-wds-web-15	D	Pass	WDS-2	App Bar breaks facet selection on Photojournal Beta
pds-wds-web-19	D	Skip	hidden	Update NAIF in App Bar
pds-wds-web-12	I	fail	WDS-3	Show screenshot of app-bar in README
Pds-wds-web-17	I	Pass	WDS-4	App Bar Node List Reordering
pds-api-client_2	D	Pass	APIC.1	PDS API Client 1.0.0 cannot communicate with pds-gamma
mi-label_10	D	Pass	MI_LABEL	Windows version will not run because of error in generate.bat

Components not tested: pds4-jparser (internal to the software), transfer (no changes), pds-site-app (already operational), pds-api(internal to the software), pds-doi-ui(not-ready).

5 Miscellaneous

5.1 Test Data

https://pds-engineering.jpl.nasa.gov/content/build_11.1_deliverables has this document as well as test data PDS4test.build11.1.tgz.

5.2 Test Environment

Build 11.1 integration and test environment encompasses the following:

Host	OS	RAM	Software
RC's laptop	macOS 10.14.6	32GB	harvest lddtool, registry-manager, im
pds-int	CentOS Linux 7	8GB	Validate, pds-deep-archive, pds-doi-api, pds-api
GC's laptop	macOS 11.2.3	16 GB	Validate, pds-deep-archive,doi-service
GC's pc	Windows 10 Pro	8 GB	Validate, mi-label
GC's iphone	Ios 14.4.2		Pds-wds-web

5.3 Configuration Management

The PDS Configuration Management process will uniquely identify the build 11.1 and other releases. It will be followed and maintained by the Operations Team, which will act as the configuration management process engineer.

5.4 Acronyms

DN – PDS Discipline or Data Node

EN – PDS Engineering Node

I&T – Integration and Test

NASA – National Aeronautics and Space Administration

OS – Operating System

PDS – Planetary Data System

PDS3 – Version 3.8 of the PDS Data Standards

PDS4 – Version 4.0 of the PDS Data Standards

PDS MC – PDS Management Council