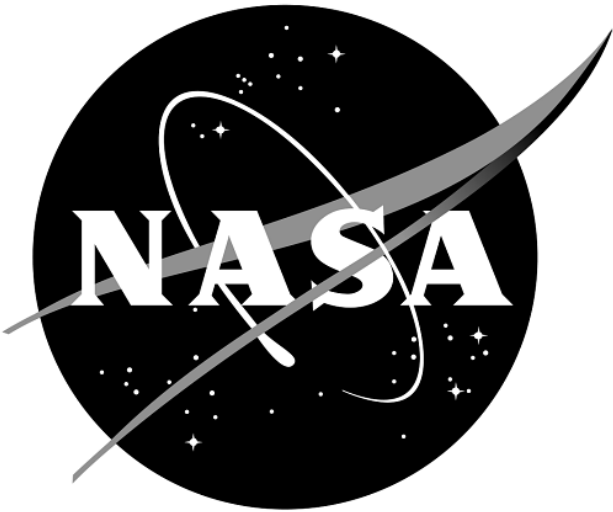




Plan Document

NASA Planetary Data System
PDS4 System
Build 12.0 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 BNDL.T1 to .T4	Richard Chen
3b	Apr 09, 2013	Added AAFUNCTION.*	Richard Chen
3b.1	Aug 30, 2013	Incorporated JIRA resolutions	Richard Chen
3b.2	Sep 15, 2013	Cleaned up and removed not applicable test procedures	Richard Chen, Emily Law
4a	Dec. 05, 2013	Incorporated PDS4ORR-RFA1's recommendations by: <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 Added tests TPRT.1, SCMA.1 to test transport service and schema. Removed redundant tests AATESTME.*.	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
12.0	Oct. 31, 2021	Added tests for PDSI-API, PDS-API-Client and PDS.nasa.gov-UX. Added tests that uniquely address defects and enhancements for each tool.	Gary Chen Richard 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 12.0 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 12.0 is based upon the “Release Description Document (build 12.0), software changes” (RDD), available at

<https://nasa-pds.github.io/releases/12.0/rdd.html>

The modules tested in build 12.0:

- Harvest 3.5.0 (installed with pds-registry-app 1.0.0)
- LDDTool 1.1.0
- Registry-manager 4.2.0 (installed with pds-app-registry 0.3.2)
- Validate 2.1.0
- pds-deep-archive 1.1.0
- 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 12.0 Integration testing is the execution and management of tests by the Engineering Node to ensure that the release of Build 12.0 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 12.0 requirements as specified in their Software Requirements and Design documents.

# of tests performed	# of tests passed	# of tests failed	# of high priority anomalies
138	133	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.

Four issues failed

Issue ID	Type	Result	Test ID	Description
pds-api#83	R	fail	API.11	As an API user, I want to search using URL parameters.
pds-doi-ui#42	R	fail	DOI-UI.7	As a user, I want to acquire a DOI for a PDS4 product that has been registered and is publicly accessible
validate#69	R	fail	VAL.1	As a user, I want to validate that all context objects specified in observational products are referenced in the parent bundle/collection Reference List
validate#308	R	fail	VAL.2	As a user, I want to check that all Internal References are valid references to other PDS4 products within the current validating bundle
pds-doi-ui#35	D	fail	DOI-UI.2	As a SA, I don't want security vulnerabilities in the public UI

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

[Section 4](#) lists the status of all issues described in the [Build 12.0 RDD](#). Briefly,

133 issues were verified as passed,

5 issues were marked as failed (2 in VAL, 2 in DOI-UI, 1 in pds-api), all are minor issues. pds-api#83, the api didn't return the product using the '?' search in the URL, but other API search string returns the product. pds-doi-ui#42, the doi ui is not fully working yet, the expected page was not displayed. Validate#69 and Validate#308 were partially working; dev team agree to reopen these two issues. pds-doi-ui#35 has wants to claim 0 vulnerabilites when using npm install, but we still see new vulnerabilities after running 'npm audit fix -force'.

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 12.0 covers changed functionality since build 10a.

3.1 Setup

The tests are organized upon the Release Description for build 12.0:

[Build 12.0 RDD](#)

The tests for build 12.0 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**
- **pds-api**
- **pds-doi-service**
- **pds-doi-ui**
- **pds-registry-app**
- **registry-api-service**

Other needed software:

- **python3**, for pds-deep-archive
- **elasticsearch**
- 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_12.0_it_deliverables , also download PDS4test.build12.0.tgz, the test input files. In the tests below, replace with appropriate values:

/Users/gchen/pds/ pds4test.build12.0/	directory where input files are extracted
/Users/gchen/pds/ 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 12.0 level 5 requirements of the new or modified modules. In each test case, # indicates a comment, usually linked to an RDD issue.

3.3 Tools installation and configuration

Testing for Release Build B12.0 will be performed on Mac OS, Linux and Windows 10 Pro. PDS tools from previous build will be uninstalled, a clean install will be performed following installation and configuration steps in each tool’s installation page. General testing using historical test bundles will be performed for each tool after installation.

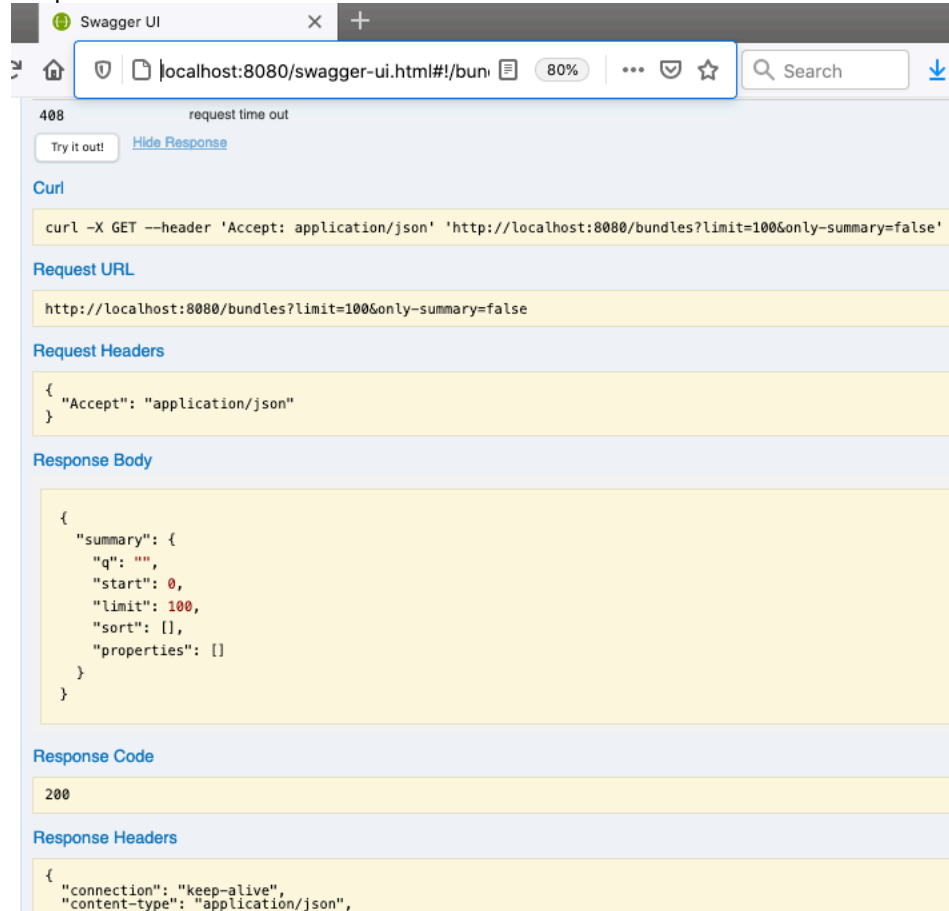
Test ID	INT.1
Issue Description	pds-doi-service installation and configuration
Comments	Follow Installation manual page: https://nasa-pds.github.io/pds-doi-service/installation/index.html
Test Steps:	Step 1: gchen@Johns-MacBook-Pro ~ % cd pds gchen@Johns-MacBook-Pro pds % cd venv gchen@Johns-MacBook-Pro venv % bin/pip install pds-doi-service Step 2: gchen@Johns-MacBook-Pro venv % bin/pds-doi-cmd --help
Test Result:	Step 1: Successfully built bs4 nltk openpyxl Installing collected packages: pypersistent, attrs, MarkupSafe, jsonschema, isodate, Werkzeug, PyYAML, openapi-schema-validator, jinja2, itsdangerous, idna, click, charset-normalizer, certifi, soupsieve, requests, openapi-spec-validator, inflection, Flask, clickclick, tqdm, swagger-ui-bundle, regex, pytz, numpy, joblib, jdcals, et-xmlfile, elementpath, connexion, beautifulsoup4, zipp, xmldict, xmlschema, xlrd, waitress, pandas, openpyxl, nltk, flask-cors, filelock, distlib, chardet, bs4, appdirs, pds-doi-service Attempting uninstall: certifi Found existing installation: certifi 2021.10.8 Uninstalling certifi-2021.10.8: Successfully uninstalled certifi-2021.10.8 Successfully installed Flask-1.1.2 MarkupSafe-2.0.1 PyYAML-6.0 Werkzeug-0.16.0 appdirs-1.4.4 attrs-21.2.0 beautifulsoup4-4.10.0 bs4-0.0.1 certifi-2020.4.5.1 chardet-3.0.4 charset-normalizer-2.0.7 click-8.0.3 clickclick-20.10.2 connexion-2.7.0 distlib-0.3.1 elementpath-2.3.2 et-xmlfile-1.1.0 filelock-3.0.12 flask-cors-3.0.9 idna-2.9

	<pre> inflection-0.5.1 isodate-0.6.0 itsdangerous-2.0.1 jdcalf-1.4.1 jinja2-3.0.1 joblib-1.1.0 jsonschema- 3.0.0 nltk-3.5 numpy-1.21.2 openapi-schema- validator-0.1.4 openapi-spec-validator-0.3.1 openpyxl-3.0.0 pandas-1.3.3 pds-doi-service-2.0.1 pysistent-0.18.0 pytz-2020.1 regex-2021.10.8 requests-2.26.0 soupsieve-2.2.1 swagger-ui-bundle- 0.0.9 tqdm-4.62.3 waitress-2.0.0 xlrd-2.0.1 xmlschema-1.5.1 xmltodict-0.12.0 zipp-3.6.0 Step 2: usage: pds-doi-cmd [-h] {reserve,draft,release,check,list} ... PDS core command for DOI management. The available subcommands are: reserve (Submit a request to reserve a DOI prior to public release. Reserved DOI's may be released after via the release action), draft (Update a record without submission to the service provider. Metadata updates are pulled from the provided PDS4/DOI label.), release (Move a reserved DOI to review, or submit a DOI for release to the service provider), check (Check for pending DOI submissions from the service provider and update the local database with any changes in status), list (List DOI entries within the transaction database that match the provided search criteria), positional arguments: {reserve,draft,release,check,list} optional arguments: -h, --help show this help message and exit </pre>
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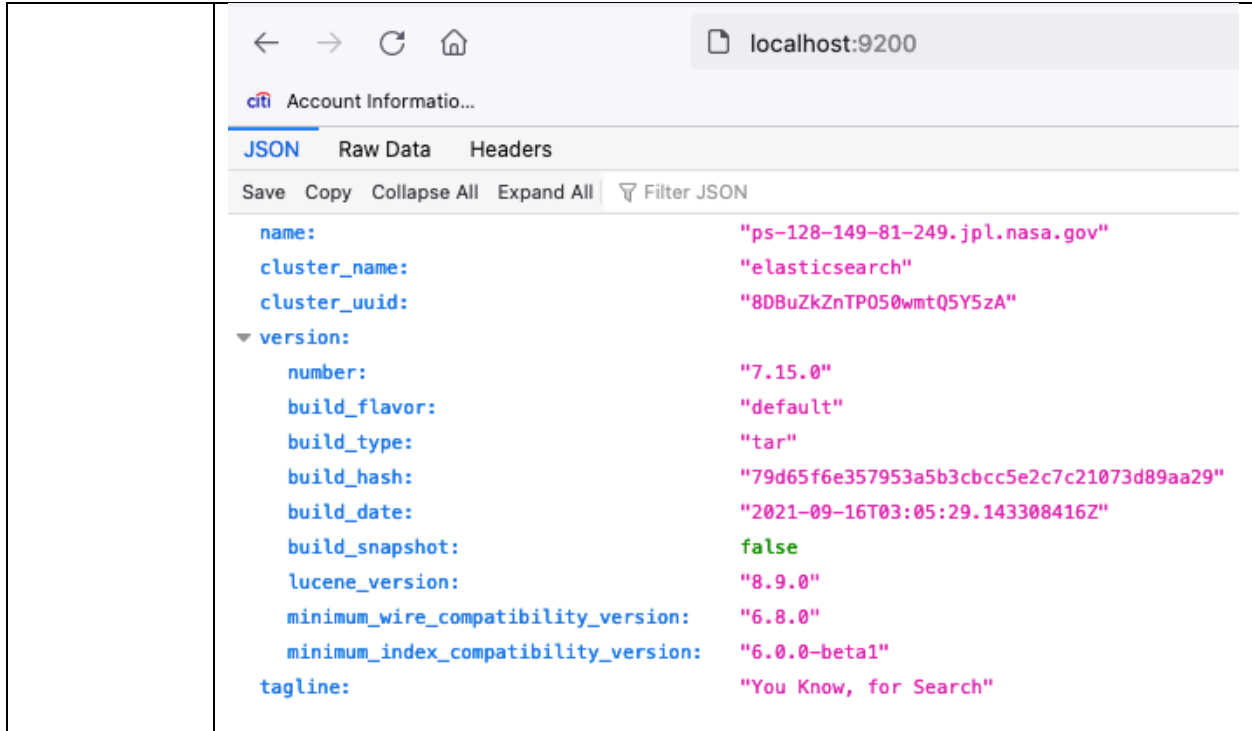
Test ID	INT.2
Issue Description	pds-registry-app/harvest installation and configuration
Comments	Follow Installation manual page: https://nasa-pds.github.io/pds-registry-app/install/tools.html
Test Plan	<ul style="list-style-type: none"> • Verify/Install Required software. • Download current release • Follow config steps • Verify installation
Test Steps	Assumes elasticsearch, pds-app-registry, harvest installed, with executables in \$PATH and registry-api-service-0.1.0 installed in /Users/gchen/PDS4tools/ 1. rm -r /tmp/harvest

	<pre> https://www.elastic.co/guide/en/elasticsearch/reference/7.15/security-minimal-setup.html to enable security."] 2021-10-09 10:18:59.058 INFO 80158 --- [main] .e.e.ElasticSearchRegistryConnectionImpl : Cross cluster search is inactive 2021-10-09 10:18:59.374 INFO 80158 --- [main] g.n.p.a.e.configuration.WebMVCCConfig : Number of converters available 0 2021-10-09 10:18:59.531 INFO 80158 --- [main] pertySourcedRequestMappingHandlerMapping : Mapped URL path [/api-docs] onto method [springfox.documentation.swagger2.web.Swagger2Controller#getDocumentation(String, HttpServletRequest)] 2021-10-09 10:18:59.703 WARN 80158 --- [main] ion\$DefaultTemplateResolverConfiguration : Cannot find template location: classpath:/templates/ (please add some templates or check your Thymeleaf configuration) 2021-10-09 10:18:59.749 INFO 80158 --- [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port(s): 8080 (http) with context path "" 2021-10-09 10:18:59.750 INFO 80158 --- [main] d.s.w.p.DocumentationPluginsBootstrapper : Context refreshed 2021-10-09 10:18:59.772 INFO 80158 --- [main] d.s.w.p.DocumentationPluginsBootstrapper : Found 1 custom documentation plugin(s) 2021-10-09 10:18:59.856 INFO 80158 --- [main] s.d.s.w.s.ApiListingReferenceScanner : Scanning for api listing references 2021-10-09 10:19:00.169 INFO 80158 --- [main] g.n.pds.api.engineering.SpringBootMain : Started SpringBootMain in 4.419 seconds (JVM running for 4.916) Step 4: Elasticsearch URL: http://localhost:9200 Deleting index registry Deleting index registry-refs Deleting index registry-dd Done Step 5: Elasticsearch URL: http://localhost:9200 Creating index... Index: registry Schema: /Users/gchen/pds/PDS4tools/registry- manager/elastic/registry.json Shards: 1 Replicas: 0 [WARN] Parameter [index] has no effect on type [binary] and will be removed in future [WARN] Elasticsearch built-in security features are not enabled. Without authentication, your cluster could be accessible to anyone. See https://www.elastic.co/guide/en/elasticsearch/reference/7.15/security- minimal-setup.html to enable security. Done Creating index... Index: registry-refs Schema: /Users/gchen/pds/PDS4tools/registry- manager/elastic/refs.json Shards: 1 Replicas: 0 [WARN] Elasticsearch built-in security features are not enabled. Without authentication, your cluster could be accessible to anyone. See https://www.elastic.co/guide/en/elasticsearch/reference/7.15/security- minimal-setup.html to enable security. Done </pre>
--	---

```
Creating index...
  Index: registry-dd
  Schema: /Users/gchen/pds/PDS4tools/registry-manager/elastic/data-dic.json
  Shards: 1
  Replicas: 0
[WARN] Elasticsearch built-in security features are not enabled.
Without authentication, your cluster could be accessible to anyone.
See
https://www.elastic.co/guide/en/elasticsearch/reference/7.15/security-minimal-setup.html to enable security.
Done
[INFO] Loading ES data file: /Users/gchen/pds/PDS4tools/registry-manager/elastic/data-dic-data.jar:dd.json
[INFO] Loaded 3017 document(s)
Step 6:
```



Step 7:



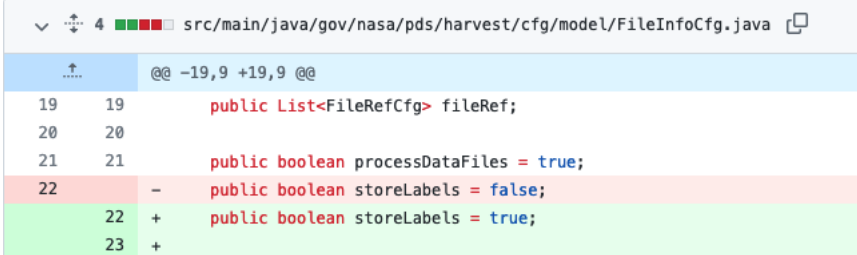
Test ID	INT.3
Issue Description	Pds-doi-ui installation and configuration
Comments	Pass
Test Steps	<ul style="list-style-type: none"> • Verify/Install Requirements. • Download and unpack current version • <code>serve -s pds-doi-ui</code> • Verify installation
Test Result	<pre> Serving! - Local: http://localhost:5000 - On Your Network: http://192.168.68.104:5000 Copied local address to clipboard! </pre>

3.4 Software Changes

Test ID	HAR.1
Issue ID	Harvest#60
Issue Type	Requirement
Issue Description	As a user, I want to ingest the PDS4 label as JSON in a binary blob form
Comments	Pass
Test Step	Tested with Pds-api#101

Test ID	HAR.2
Issue ID	Harvest#55
Issue Type	Enhancement
Issue Description	Quick fix to support date/time conversion to "ISO instant" format
Comments	Pass
Test Step	<ol style="list-style-type: none"> 1. Clean database as described in HVT.0 2. Modify cfg file in hvt55 3. cd pds4test.build12.0/testHvt/hvt55 4. harvest -c hvt55.cfg 5. registry-manager load-data -dir /tmp/harvest/out 6. In browser, http://localhost:9200/registry/_search?q=*
Test Results	<p>Step 2.</p> <pre><?xml version="1.0" encoding="UTF-8"?> <harvest nodeName="PDS_ENG"> <directories> <!-- Path to one or more folders with some PDS4 product labels --> <path>/Users/gchen/pds/pds4test.build12.0/testHvt/hvt55</path> </directories> <!-- NOTE: By default only lid, vid, lidvid, title and product class are exported. If you want more metadata to be exported, provide additional configuration elements, such as xpathMaps, internalRefs, autogenFields, fileInfo, fileRef. --> <!-- Extract all fields. Field names always go 2 deep: <namespace>.<class_name>.<namespace>.<attribute_name> --> <autogenFields> <dateFields> <field>cassini:VIMS_Specific_Attributes/cassini:earth_received_start_time</field> <field>cassini:VIMS_Specific_Attributes/cassini:earth_received_stop_time</field> <field>cassini:VIMS_Specific_Attributes/cassini:start_time_doy</field> <field>cassini:VIMS_Specific_Attributes/cassini:stop_time_doy</field> </dateFields> </autogenFields> </harvest></pre> <p>Step 6:</p>

<pre> ops:Data_File_Info/ops:creation_date_time: "2020-11-17T00:27:06Z" ops:Data_File_Info/ops:file_name: "collection_data-1.0.csv" ops:Data_File_Info/ops:file_ref: "/Users/gchen/pds/pds4test.build12.0/1 ops:Data_File_Info/ops:file_size: "79" ops:Data_File_Info/ops:md5_checksum: "78329ba8a907c42a98cb700ff8dd5d9b" ops:Data_File_Info/ops:mime_type: "text/plain" ops:Harvest_Info/ops:harvest_date_time: "2021-10-24T17:45:24.004751Z" ops:Harvest_Info/ops:node_name: "PDS_ENG" ops:Label_File_Info/ops:blob: "eJzVWV9z4jgSf59PoWmfqYqtoFMNgnreIoLj /Ooufcjvz3AXwFvVG3a4tw3kFvEHZgF0mwXGU /MxYdoYkNfz+he8Y5EUfo0kb/gMdfY7ogL0Mj5 //hWf5Cr+zEZi0ZMAtepy4ePeQNrhdhPLP4GT /cD9RNMf8Fd0TksQz8PFGpjV0Ez0wQzw8pFI /N3WwvWX877vz4Iwhcq5fgrIUny4kCrM4JMm /Om/dq6aWdKp3ybbkdCN2VIX4XTUfoCedpYbDf /MqBrkxi/FAffd06j+e/DmrsSYV+VSv3msZEJ /miQ6ip6So6IMGU0S0ihvsQyF7tq69KW01zR ops:Label_File_Info/ops:creation_date_time: "2020-11-22T08:18:40Z" </pre>
--

Test ID	HAR.3
Issue ID	Harvest#58
Issue Type	Enhancement
Issue Description	Enable blob ingestion by default
Comments	Pass
Test Step	Step 1: inspect code update in github: storeLabels initialized to true Step 2: get warning if not true:
Test Result	<p>Step 1:</p>  <p>Step 2:</p> <pre> if(fileInfoCfg.storeLabels == false) { md5Digest = MessageDigest.getInstance("MD5"); buf = new byte[1024 * 16]; tika = new Tika(); log.warn("BLOB storage is disabled (see <fileInfo storeLabels=\"false\"> configuration). " + "Not all Registry features will be available."); } </pre>

Test ID	API.1
Issue ID	Pds-api#67
Issue Type	Requirement
Issue Description	As an API user, I want to access supplemental metadata from Product Metadata Supplemental.

Comments	Closing this as completed since the metadata is already in the registry alongside the archival metadata. We can review with API working group to determine if this should be split out separate in the query results or not.
Test Plan	Skip

Test ID	API.2
Issue ID	Pds-api#80
Issue Type	Requirement
Issue Description	As a developer, I never want the label blob to be returned.
Comments	Pass
Test Steps	Step 1: go to https://pds-gamma.jpl.nasa.gov/api/swagger-ui.html#!/products/products Step 2: enter 'label: blob' in fields Step 3: click Try it out
Test Results	No blob data returned

Test ID	API.3
Issue ID	Pds-api#91
Issue Type	Enhancement
Issue Description	Disable XML and HTML responses from current registry-api-service implementation
Comments	Pass
Test Steps	Step 1: go to https://pds-gamma.jpl.nasa.gov/api/swagger-ui.html#!/products/products Step 2: Click on the dropdown box for Response Content Type Step 3: choose 'application/pds+xml'
Test Result	Step 2: Only showing the following options: Application/json Application/pds+xml Application/pds+json Step 3: Example Value shows <?xml version="1.0"?> <!-- invalid XML --> Request Headers shows: { "Accept": "application/json" } Response Body: no content Response Code: 501

Test ID	API.4
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Issue ID	Pds-api#101
Issue Type	Requirement
Issue Description	As a user, I want to receive a JSON response that contains the PDS4 label metadata in JSON format (application/pds4+json)
Comments	Pass
Test Steps	<p>Step 1: go to https://pds-gamma.jpl.nasa.gov/api/swagger-ui.html#!/products/products</p> <p>Step 2: Click on the dropdown box for Response Content Type</p> <p>Step 3: choose 'application/pds4+json'</p> <p>Step 4: enter 'urn:nasa:pds:insight_documents:document_hp3rad' in identifier field</p> <p>Step 4: Click 'try it out'</p> <p>Step 5: run this command in terminal:</p> <pre>gchen@Johns-MacBook-Pro pds-registry-app-1.0.0 % curl -X GET --header 'Accept: application/pds4+json' 'https://pds-gamma.jpl.nasa.gov/api/products/urn%3Anasa%3A%3Ainsight_documents%3Adocument_hp3rad'</pre>
Test Results:	<pre>{ "id": "urn:nasa:pds:insight_documents:document_hp3rad::8.0", "meta": { "label_file": {"file_name": "collection_document_hp3rad.xml", "file_ref": "https://pds-gamma.jpl.nasa.gov/data/pds4/test-data/registry/urn-nasa-pds-insight_documents/document_hp3rad/collection_document_hp3rad.xml", "creation_date": "2020-12-11T01:28:22Z", "file_size": "7220", "md5_checksum": "b05da8b43e34e1fbbd50f6d70a73649"}, "data_files": [{"file_name": "collection_document_hp3rad.csv", "file_ref": "https://pds-gamma.jpl.nasa.gov/data/pds4/test-data/registry/urn-nasa-pds-insight_documents/document_hp3rad/collection_document_hp3rad.csv", "creation_date": "2020-12-11T01:28:48Z", "file_size": "136", "md5_checksum": "12296d57b0ad1ecc7058a651b9c9a9d"}, {"mime_type": "text/plain"}]}}</pre>

Test ID	API.5
Issue ID	Pds-api#105
Issue Type	Requirement
Issue Description	As an API user, I want to know how long a request took to complete.
Comments	Pass

Test Steps	<p>Step 1: go to https://pds-gamma.jpl.nasa.gov/api/swagger-ui.html#!/products/products</p> <p>Step 2: Click on the dropdown box for Response Content Type</p> <p>Step 3: choose ‘application/pds4+json’</p> <p>Step 4: Click ‘try it out’</p>
Test Result	<pre> summary": { "q": "", "hits": 10000, "took": 561, "start": 0, "limit": 100, "sort": [], "properties": [</pre>

Test ID	API.6
Issue ID	Pds-api#56
Issue Type	Requirement
Issue Description	As an API user, I want to know the children and ancestors of bundle, collections, and products.
Comments	Parent issue.
Test Plan	

Test ID	API.7
Issue ID	Pds-api#59
Issue Type	Requirement
Issue Description	As an API user, I want to know the Product(s) that belong to a given Bundle..
Comments	Pass
Test Plan	<p>Step 1: https://pds-gamma.jpl.nasa.gov/api/swagger-ui.html</p> <p>Step 2: click on ‘Bundle’s products’</p> <p>Step 3: enter ‘urn:nasa:pds:insight_documents::2.0’ in identifier</p> <p>Step 4. Click ‘Try it out’</p>
Test Result	Step 4:

	<p>Request URL</p> <pre>https://pds-gamma.jpl.nasa.gov/api/bundles/urn%3Anasa%3Aapds%3Ainsight_documents%3A%3A2.0/products?limit=1&only-summary=</pre>
	<p>Request Headers</p> <pre>{ "Accept": "application/json" }</pre>
	<p>Response Body</p> <pre>{ "data": [{ "id": "urn:nasa:pds:insight_documents:document_hp3rad:hp3_rad_sis::2.0", "type": "Product_Document", "title": "InSight HP3 and RAD Data Product SIS", "investigations": [{ "id": "urn:nasa:pds:context:investigation:mission.insight", "href": "http://pds-gamma.jpl.nasa.gov/api/products/urn:nasa:pds:context:investigation:mission.insight" }], "observing_system_components": [{ "id": "urn:nasa:pds:context:instrument_host:spacecraft.insight", "href": "http://pds-gamma.jpl.nasa.gov/api/products/urn:nasa:pds:context:instrument_host:spacecraft.insight" }, { "id": "urn:nasa:pds:context:instrument:hp3.insight", "href": "http://pds-gamma.jpl.nasa.gov/api/products/urn:nasa:pds:context:instrument:hp3.insight" }] }] }</pre>

Test ID	API.8
Issue ID	Pds-api#60
Issue Type	Requirement
Issue Description	As an API user, I want to know the Bundle for a given Product.
Comments	Pass
Test Step	<p>Step 1: get the products belonging to a bundle Get /bundles/{identiflier}/products For urn:nasa:pds:insight_documents::2.0 Step 2: use the result of step 1 to test for getting the bundle of the products belonging to. /product/{identifier}/bundles urn:nasa:pds:insight_documents:document_hp3rad:hp3_rad_sis::2.0</p>
Test Results	<p>Step 1:</p> <pre>"data": [{ "id": "urn:nasa:pds:insight_documents:document_hp3rad:hp3_rad_sis::2.0", "type": "Product_Document", "title": "InSight HP3 and RAD Data Product SIS", "investigations": [{ "id": "urn:nasa:pds:context:investigation:mission.insight",</pre>

	<pre> "href": "http://pds- gamma.jpl.nasa.gov/api/products/urn:nasa:pds:context:investigation: mission.insight" }], Step 2: "data": [{ "id": "urn:nasa:pds:insight_documents::2.0", "type": "Product_Bundle", "title": "Mars InSight Lander Document Archive", "investigations": [{ "id": "urn:nasa:pds:context:investigation:mission.insight", "href": "http://pds- gamma.jpl.nasa.gov/api/products/urn:nasa:pds:context:investigation: mission.insight" }], "observing_system_components": [{ "id": "urn:nasa:pds:context:instrument_host:spacecraft.insight", "href": "http://pds- gamma.jpl.nasa.gov/api/products/urn:nasa:pds:context:instrument_hos t:spacecraft.insight" }], }] </pre>
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Test ID	API.9
Issue ID	Pds-api#61
Issue Type	Requirement
Issue Description	As an API user, I want to know the Collection(s) for a given Product.
Comments	Pass
Test Steps	<p>Step 1: get the products belonging to a Collection Get /collection/{identifier}/products For urn:nasa:pds:orex.ovirs:data_calibrated</p> <p>Step 2: use the result of step 1 to test for getting the bundle of the products belonging to. /product/{identifier}/collection urn:nasa:pds:orex.ovirs:data_calibrated:20181102t040108s958_ovr_spacel2_calv2. fits:1.0</p>
Test Result	<p>Step 1: "data": [{</p>

	<pre> "id": "urn:nasa:pds:orex.ovirs:data_calibrated:20181102t040108s958_ovr_sp acel2_calv2.fits::1.0", "type": "Product_Observational", "title": "OSIRIS-REx OVIRS Calibrated Science Data Product (L2) 2018-11-02T04:01:08.958Z", "start_date_time": "2018-11-02T04:01:08.958Z", "stop_date_time": "2018-11-02T04:01:08.958Z", "investigations": [{ "id": "urn:nasa:pds:context:investigation:mission.orex", "href": "http://pds- gamma.jpl.nasa.gov/api/products/urn:nasa:pds:context:investigation: mission.orex" }], Step 2: { "id": "urn:nasa:pds:orex.ovirs:data_calibrated::10.0", "type": "Product_Collection", "title": "Origins, Spectral Interpretation, Resource Identification, Security, Regolith Explorer (OSIRIS-REx): OSIRIS- REx Visible and InfraRed Spectrometer (OVIRS) calibrated science spectral data products.", "start_date_time": "2016-09-08T00:00:00Z", "stop_date_time": "3000-01-01T00:00:00.000Z", "investigations": [{ "id": "urn:nasa:pds:context:investigation:mission.orex", "href": "http://pds- gamma.jpl.nasa.gov/api/products/urn:nasa:pds:context:investigation: mission.orex" }], </pre>
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Test ID	API.10
Issue ID	Pds-api#62
Issue Type	Requirement
Issue Description	As an API user, I want to know the Bundle for a given Collection.
Comments	Pass
Test Steps	Step 1: https://pds-gamma.jpl.nasa.gov/api/swagger-ui.html Step 2: click on '/collection/{identifier}/bundles Step 3: enter 'urn:nasa:pds:orex.ovirs:data_calibrated' in indentifier Step 4. Click 'Try it out'

Test Results	<div style="border: 1px solid #ccc; background-color: #f9f9f9; padding: 5px;"> <p>Request URL</p> <pre>https://pds-gamma.jpl.nasa.gov/api/collections/urn%3Anasa%3Aapds%3Aorex.ovirs%3Adata_calibrated/bundles?limit=100&only-s</pre> </div> <div style="border: 1px solid #ccc; background-color: #f9f9f9; padding: 5px; margin-top: 5px;"> <p>Request Headers</p> <pre>{ "Accept": "application/json" }</pre> </div> <div style="border: 1px solid #ccc; background-color: #f9f9f9; padding: 5px; margin-top: 5px;"> <p>Response Body</p> <pre>{ "pds:Modification_Detail/pds:description", "pds:Identification_Area/pds:product_class", "pds:Identification_Area/pds:title", "ops:Label_File_Info/ops:file_name", "pds:Observing_System_Component/pds:name", "pds:Target_Identification/pds:type", "ref_lid_target", "pds:Investigation_Area/pds:type", "pds:Bundle_Member_Entry/pds:lidvid_reference", "pds:Identification_Area/pds:version_id" } }, "data": [{ "id": "urn:nasa:pds:orex.ovirs::10.0", "type": "Product_Bundle", "title": "Origins, Spectral Interpretation, Resource Identification, Security, Regolith Explorer (OSIRIS-REX)", "start_date_time": "2016-09-08T23:05:00Z", "stop_date_time": "3000-01-01T00:00:00.000Z", }] }</pre> </div>
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Test ID	API.11
Issue ID	Pds-api#83
Issue Type	Requirement
Issue Description	As an API user, I want to search using URL parameters.
Comments	Fail
Test Step	<p>Step 1: curl -X GET --header 'Accept: application/json' 'https://pds-gamma.jpl.nasa.gov/api/products/urn%3Anasa%3Aapds%3Ainsight_documents'</p> <p>Step 2: curl -X GET --header 'Accept: application/json' 'https://pds-gamma.jpl.nasa.gov/api/products?limit=100&q=lid%20eq%20urn%3Anasa%3Aapds%3Ainsight_documents&only-summary=false'</p>
Test Results:	<p>Step 1: { "id": "urn:nasa:pds:insight_documents::2.0", "type": "Product_Bundle", "title": "Mars InSight Lander Document Archive", "investigations": [{ "id": "urn:nasa:pds:context:investigation:mission.insight", "href": "http://pds-gamma.jpl.nasa.gov/ap ...</p>

	Step 2: 404. no content.
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Test ID	API.12
Issue ID	Pds-api#99
Issue Type	Requirement
Issue Description	As an API user, I want to be able to use the API for free text search.
Comments	Pass
Test Plan	https://pds-gamma.jpl.nasa.gov/api/products?start=0&limit=100&q=mars
Test Steps	<p>Step 1: go to https://pds-gamma.jpl.nasa.gov/api/swagger-ui.html#!/products/products</p> <p>Step 2: Enter mars in Keywords field</p> <p>Step 3. Click Try it out.</p> <p>Step 4: enter ‘*insight*’ in keywords field</p> <p>Step 5: Click Try it out</p> <p>Step 6: enter ‘2018’ in keywords field</p> <p>Step 7 Click Try it out</p>
Test Results	<p>Step 3:</p> <pre>https://pds-gamma.jpl.nasa.gov/api/products?limit=1&keyword=mars&only-summary=false</pre> <p>Request Headers</p> <pre>{ "Accept": "application/json" }</pre> <p>Response Body</p> <pre>{ "type": "Product_bundle", "title": "Mars InSight Lander Document Archive", "investigations": [{ "id": "urn:nasa:pds:context:investigation:mission.insight", "href": "http://pds-gamma.jpl.nasa.gov/api/products/urn:nasa:pds:context:investigation:mission.insight" }], "observing_system_components": [{ "id": "urn:nasa:pds:context:instrument_host:spacecraft.insight", "href": "http://pds-gamma.jpl.nasa.gov/api/products/urn:nasa:pds:context:instrument_host:spacecraft.insight" }, { "id": "urn:nasa:pds:context:instrument:apss-ifg.insight", "href": "http://pds-gamma.jpl.nasa.gov/api/products/urn:nasa:pds:context:instrument:apss-ifg.insight" }] }</pre> <p>Step 5:</p>

Request URL

https://pds-gamma.jpl.nasa.gov/api/products?limit=1&keyword=*insight*&only-summary=false

Request Headers

{
 "Accept": "application/json"
}

Response Body

```

"data": [
  {
    "id": "urn:nasa:pds:insight_documents:2.0",
    "type": "Product_Bundle",
    "title": "Mars InSight Lander Document Archive",
    "investigations": [
      {
        "id": "urn:nasa:pds:context:investigation:mission.insight",
        "href": "http://pds-gamma.jpl.nasa.gov/api/products/urn:nasa:pds:context:investigation:mission.insight"
      }
    ],
    "observing_system_components": [
      {

```

Step 7:

Request URL

https://pds-gamma.jpl.nasa.gov/api/products?limit=1&keyword=2018&only-summary=false

Request Headers

{
 "Accept": "application/json"
}

Response Body

```

"data": [
  {
    "id": "urn:nasa:pds:orex.ovirs:data_calibrated:20181102t040108s958_ovr_space12_calv2.fits::1.0",
    "type": "Product_Observational",
    "title": "OSIRIS-REx OVIRS Calibrated Science Data Product (L2) 2018-11-02T04:01:08.958Z",
    "start_date_time": "2018-11-02T04:01:08.958Z",
    "stop_date_time": "2018-11-02T04:01:08.958Z",

```

Test ID	API.13
Issue ID	Pds-api#73
Issue Type	Defect
Issue Description	As a n00b paginator, there might be an off-by-1 error in the limit parameter.
Comments	Pass
Test Steps	<p>Step 1: enter url for postman https://pds-gamma.jpl.nasa.gov/api/collections/urn%3Anasa%3Aapds%3Ainsight_documents%3Adocument_hp3rad%3A%3A8.0/products?start=0&limit=0&fields=ops%3AData_File_Info.ops%3Amd5_checksum&only-summary=false</p> <p>Step 2: Enter 0 for limit, click send. Step 3: Enter 1 for limit, click send. Step 4: Enter 2 for limit, click send. Step 5: Enter new url in postman</p>

	<p>https://pds-gamma.jpl.nasa.gov/api/bundles/urn%3Anasa%3Aapds%3Ainsight_documents%3A%3A2.0/collections?limit=2&only-summary=false</p> <p>Step 6: Enter 0 for limit, click send. Step 7: Enter 1 for limit, click send. Step 8: Enter 2 for limit, click send.</p>
Test Results:	<p>Step 2: Returns 0 item Step 3: Returns 1 data Step 4: Returns 2 data Step 6: Returns 0 item Step 7: Returns 1 data Step 8: Returns 2 data</p>

Test ID	API.14
Issue ID	Pds-api#68
Issue Type	Requirement
Issue Description	As an API user, I want to know in the response how many hits are returned for an API query.
Comments	Pass
Test Plan	Same as pds-api#105
Test Step	Enter Url : https://pds-gamma.jpl.nasa.gov/api/collections/urn%3Anasa%3Aapds%3Ainsight_documents%3Aadocument_hp3rad/all?limit=10
Test Result:	<pre>{ "summary": { "hits": 1, "took": 94, "start": 0, "limit": 10,</pre>

Test ID	API.15
Issue ID	Pds-api#95
Issue Type	Requirement
Issue Description	As a user, I want to query for all versions of a product.
Comments	Pass
Test Step	Enter url

Test ID	API.16
Issue ID	Pds-api#96

Issue Type	Requirement
Issue Description	As an API user, I want to get the latest version of a product, by default
Comments	Pass
Test Plan	<p>query to the products/{lid}</p> <p>query to the collections/{lid}</p> <p>Step 3: query to the bundles/{lid}</p> <p>https://pds-gamma.jpl.nasa.gov/api/bundles/urn%3Anasa%3Aapds%3Ainsight_documents%3Adocument_hp3rad</p>
Test Results	<p>Step 1:</p> <p>Request URL</p> <pre>https://pds-gamma.jpl.nasa.gov/api/products/urn%3Anasa%3Aapds%3Ainsight_documents%3Adocument_hp3rad</pre> <p>Request Headers</p> <pre>{ "Accept": "application/json" }</pre> <p>Response Body</p> <pre>{ "id": "urn:nasa:pds:insight_documents:document_hp3rad:8.0", "type": "Product_Collection", "title": "InSight HP3 and RAD Document Collection", "investigations": [</pre> <p>Step 2:</p> <p>Request URL</p> <pre>https://pds-gamma.jpl.nasa.gov/api/collections/urn%3Anasa%3Aapds%3Ainsight_documents%3Adocument_hp3rad</pre> <p>Request Headers</p> <pre>{ "Accept": "application/json" }</pre> <p>Response Body</p> <pre>{ "id": "urn:nasa:pds:insight_documents:document_hp3rad:8.0", "type": "Product_Collection", "title": "InSight HP3 and RAD Document Collection", "investigations": [{ "id": "urn:nasa:pds:context:investigation:mission.insight", "href": "http://pds-gamma.jpl.nasa.gov/api/products/urn:nasa:pds:context:investigation:mission.insight" }], }</pre> <p>Step 3:</p> <pre>{ "id": "urn:nasa:pds:insight_documents:document_hp3rad:8.0", "type": "Product_Collection", "title": "InSight HP3 and RAD Document Collection", "investigations": [</pre>

Test ID	API.17
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Issue ID	Pds-api#107
Issue Type	Requirement
Issue Description	As an API user, I want to explicitly request the latest version of a product.
Comments	Pass
Test Steps	<p>Step 1: Enter Url: https://pds-gamma.jpl.nasa.gov/api/products/urn%3Anasa%3Aps%3Ainsight_documents%3Adocument_hp3rad/latest</p> <p>Step 2: Enter Url: https://pds-gamma.jpl.nasa.gov/api/collections/urn%3Anasa%3Aps%3Ainsight_documents%3Adocument_hp3rad/latest</p> <p>Step 3: https://pds-gamma.jpl.nasa.gov/api/bundles/urn%3Anasa%3Aps%3Ainsight_documents%3Adocument_hp3rad/latest</p>
Test Results:	<p>Versions for this lid:</p> <pre> "pds:Modification_Detail.pds:version_id": ["0.9", "1.0", "2.0", "3.0", "4.0", "5.0", "6.0", "7.0", "8.0"], </pre> <p>Step 1:</p> <pre> { "id": "urn:nasa:pds:insight_documents:document_hp3rad:8.0", "type": "Product_Collection", "title": "InSight HP3 and RAD Document Collection", "investigations": [{ "id": "urn:nasa:pds:context:investigation:mission.insight", "href": "http://pds-gamma.jpl.nasa.gov/api/products/urn:nasa:pds:context:investigation:mission.insight" }], "observing_system_components": [{ "id": "urn:nasa:pds:context:instrument_host:spacecraft.insight", "href": "http://pds-gamma.jpl.nasa.gov/api/products/urn:nasa:pds:context:instrument_host:spacecraft.insight" }, { "id": "urn:nasa:pds:context:instrument:hp3.insight", </pre> <p>Step 2:</p>

```

"data": [
  {
    "id": "urn:nasa:pds:insight_documents:document_hp3rad:8.0",
    "type": "Product_Collection",
    "title": "InSight HP3 and RAD Document Collection",
    "investigations": [
      {
        "id": "urn:nasa:pds:context:investigation:mission.insight",
        "href": "http://pds-gamma.jpl.nasa.gov/api/products/urn:nasa:pds:context:investigation:mission.insight"
      }
    ],
    "observing_system_components": [
      {
        "id": "urn:nasa:pds:context:instrument_host:spacecraft.insight",
        "href": "http://pds-gamma.jpl.nasa.gov/api/products/urn:nasa:pds:context:instrument_host:spacecraft.insight"
      }
    ]
  }
]

```

Step 3:

https://pds-gamma.jpl.nasa.gov/api/bundles/urn%3Anasa%3Aapds%3Ainsight_documents%3Adocument_hp3rad/latest

Request Headers

```

{
  "Accept": "application/json"
}

```

Response Body

```

{
  "id": "urn:nasa:pds:insight_documents:document_hp3rad:8.0",
  "type": "Product_Collection",
  "title": "InSight HP3 and RAD Document Collection",
  "investigations": [
    {

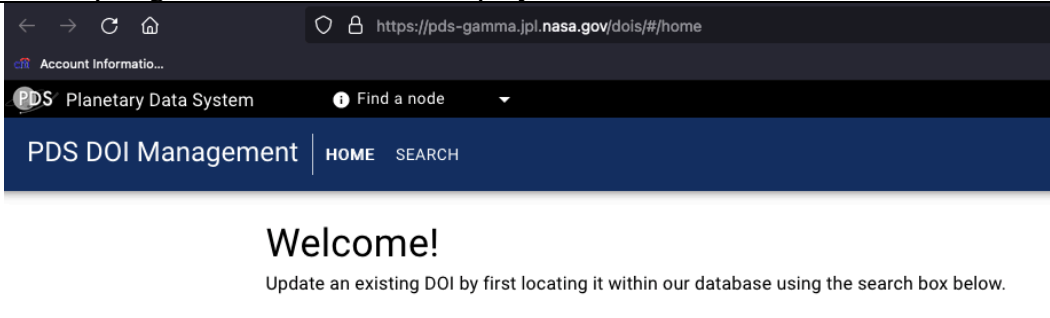
```

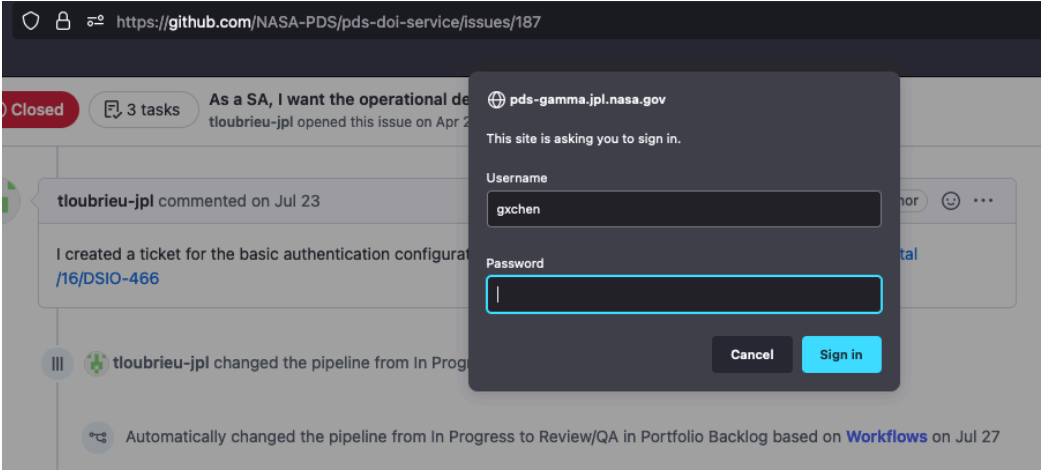
Test ID	API.18
Issue ID	Pds-api-client#6
Issue Type	Defect
Issue Description	Stack trace when calling BundlesApi.bundle_by_lidvid.
Comments	Pass
Test Steps	<pre> \$ python3 -m venv venv \$ cd venv \$ bin/pip install --quiet --upgrade setuptools wheel pip \$ bin/pip install pds.api_client \$ bin/python Python 3.9.7 (v3.9.7:1016ef3790, Aug 30 2021, 16:39:15) [Clang 6.0 (clang-600.0.57)] on 26arwin Type "help", "copyright", "credits" or "license" for more information. >>> import ssl >>> import pds.api_client >>> ssl.create_default_https_context = ssl.create_unverified_context >>> config = pds.api_client.Configuration() >>> config.host = 'https://pds-gamma.jpl.nasa.gov/api/' >>> apiClient = pds.api_client.ApiClient(config) </pre>

	<pre>>>> bundles = pds.api_client.BundlesApi(apiClient) >>> bundles.bundle_by_lidvid('urn:nasa:pds:insight_documents::2.0')</pre>
Test Result	<pre>{'description': None, 'id': 'urn:nasa:pds:insight_documents::2.0', 'investigations': [{'description': None, 'href': 'http://pds- gamma.jpl.nasa.gov/api/products/urn:nasa:pds:context:investigation :mission.insight', 'id': 'urn:nasa:pds:context:investigation:mission.insight', 'title': None, 'type': None}], 'metadata': {'creation_date_time': None, 'label_url': 'https://pds- gamma.jpl.nasa.gov/data/pds4/test-data/registry/urn-nasa-pds- insight_documents/bundle_insight_documents.xml', 'update_date_time': '2019-05-22T00:00:00Z', 'version': '2.0'},</pre>

Test ID	DEEP.1
Issue ID	pds-deep-archive#7
Issue Type	Defect
Issue Description	As a user, I want to generate AIPs and SIPs using Registry
Comments	Pass
Test Steps	gchen@Johns-MacBook-Pro venv % ./bin/pds-deep-registry-archive -s PDS ATM urn:nasa:pds:insight_documents::2.0
Test Results	<pre>INFO 📁 PDS Deep Registry-based Archive, version 1.1.0 INFO 📁 Wrote AIP checksum manifest insight_documents_v2.0_20211025_checksum_manifest_v1.0.tab with 73 entries INFO 📁 Wrote AIP transfer manifest insight_documents_v2.0_20211025_transfer_manifest_v1.0.tab with 73 entries INFO 📁 Wrote label for them both: insight_documents_v2.0_20211025_aip_v1.0.xml INFO 📁 Wrote SIP insight_documents_v2.0_20211025_sip_v1.0.tab with 73 entries INFO 📁 Wrote label for SIP: insight_documents_v2.0_20211025_sip_v1.0.xml INFO 🙌 Thanks for using this program! Bye!</pre>

Test ID	DOI.1
Issue ID	pds-doi-service_87
Issue Type	task
Issue Description	Dev beta testing with API

Comments	Pass
Test Steps	Check pds-gamma for doi-service deployment
Test Results	 <p>The screenshot shows a web browser at the URL https://pds-gamma.jpl.nasa.gov/doi/#/home. The page header includes 'PDS Planetary Data System' and 'Find a node'. Below the header, it says 'PDS DOI Management' with 'HOME' and 'SEARCH' links. The main content area features a large 'Welcome!' heading and a sub-heading: 'Update an existing DOI by first locating it within our database using the search box below.'</p>

Test ID	DOI.2
Issue ID	pds-doi-service#187
Issue Type	requirement
Issue Description	As a SA, I want the operational deployment of the service to be secure
Comments	Pass
Test Steps	<p>Step 1: Check https://pds-gamma.jpl.nasa.gov/doi/</p> <p>Step 2: Check failed sign in</p> <p>Step 3: For basic authentication and deployment documentation is on: https://osr.jpl.nasa.gov/wiki/pages/viewpage.action?pageId=152502275</p>
Test Result	<p>Step 1:</p>  <p>The screenshot shows a GitHub issue page for 'pds-doi-service' with the issue ID 187. A sign-in modal is overlaid on the page, asking for a username and password. The username field contains 'gxchen' and the password field is empty. The modal has 'Cancel' and 'Sign in' buttons.</p> <p>Step 2: Unauthorized</p> <p>This server could not verify that you are authorized to access the document requested. Either you supplied the wrong credentials (e.g., bad password), or your browser doesn't understand how to supply the credentials required.</p>

Test ID	DOI.3
Issue ID	pds-doi-service#163
Issue Type	enhancement

Issue Description	Dockerize API Service
Comments	Pass
Test Steps	Running doi-service with docker is documented at https://github.com/NASA-PDS/pds-doi-service#running-with-docker Also see Test case for pds-registry-app#163

Test ID	DOI.4																																								
Issue ID	pds-doi-service#177																																								
Issue Type	requirement																																								
Issue Description	As an API user I want to filter on lidvids with wildcards																																								
Comments	Pass																																								
Test Plan	Step 1: Search with * in the front of string. Step 2: Search with * at the end of search string. Step 3: Search with * in the middle of search string.																																								
Test Result	<p>Step 1</p> <p>Search</p> <p>Update an existing DOI by first locating it within our database using the search box below. Search by DOI, LID, LIDVID, or PDS3 Data Set ID.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 10px;"> <input type="text" value="*test"/> 🔍 ✕ </div> <p>3 results found</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>DOI</th> <th>Identifier</th> <th>Title</th> <th>Status</th> <th>Action</th> </tr> </thead> <tbody> <tr> <td>10.13143/8zrt-ra61</td> <td>urn:nasa:pds:test20210529</td> <td>Lunar Crustal Magnetic Field Map 20210529 Bundle</td> <td>Draft</td> <td>RELEASE</td> </tr> <tr> <td>10.13143/9p7y-by45</td> <td>urn:nasa:pds:test20211006::1.0</td> <td>Lunar Crustal Magnetic Field Map 20211006 collection</td> <td>Draft</td> <td>RELEASE</td> </tr> <tr> <td>10.13143/0cy5-d511</td> <td>urn:nasa:pds:test20210512::1.0</td> <td>Lunar Crustal Magnetic Field Map 20201203 Bundle</td> <td>Draft</td> <td>RELEASE</td> </tr> </tbody> </table> <p>Step 2</p> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 10px;"> <input type="text" value="test*"/> 🔍 ✕ </div> <p>3 results found</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>DOI</th> <th>Identifier</th> <th>Title</th> <th>Status</th> <th>Action</th> </tr> </thead> <tbody> <tr> <td>10.13143/8zrt-ra61</td> <td>urn:nasa:pds:test20210529</td> <td>Lunar Crustal Magnetic Field Map 20210529 Bundle</td> <td>Draft</td> <td>RELEASE</td> </tr> <tr> <td>10.13143/9p7y-by45</td> <td>urn:nasa:pds:test20211006::1.0</td> <td>Lunar Crustal Magnetic Field Map 20211006 collection</td> <td>Draft</td> <td>RELEASE</td> </tr> <tr> <td>10.13143/0cy5-d511</td> <td>urn:nasa:pds:test20210512::1.0</td> <td>Lunar Crustal Magnetic Field Map 20201203 Bundle</td> <td>Draft</td> <td>RELEASE</td> </tr> </tbody> </table> <p>Step 3</p>	DOI	Identifier	Title	Status	Action	10.13143/8zrt-ra61	urn:nasa:pds:test20210529	Lunar Crustal Magnetic Field Map 20210529 Bundle	Draft	RELEASE	10.13143/9p7y-by45	urn:nasa:pds:test20211006::1.0	Lunar Crustal Magnetic Field Map 20211006 collection	Draft	RELEASE	10.13143/0cy5-d511	urn:nasa:pds:test20210512::1.0	Lunar Crustal Magnetic Field Map 20201203 Bundle	Draft	RELEASE	DOI	Identifier	Title	Status	Action	10.13143/8zrt-ra61	urn:nasa:pds:test20210529	Lunar Crustal Magnetic Field Map 20210529 Bundle	Draft	RELEASE	10.13143/9p7y-by45	urn:nasa:pds:test20211006::1.0	Lunar Crustal Magnetic Field Map 20211006 collection	Draft	RELEASE	10.13143/0cy5-d511	urn:nasa:pds:test20210512::1.0	Lunar Crustal Magnetic Field Map 20201203 Bundle	Draft	RELEASE
DOI	Identifier	Title	Status	Action																																					
10.13143/8zrt-ra61	urn:nasa:pds:test20210529	Lunar Crustal Magnetic Field Map 20210529 Bundle	Draft	RELEASE																																					
10.13143/9p7y-by45	urn:nasa:pds:test20211006::1.0	Lunar Crustal Magnetic Field Map 20211006 collection	Draft	RELEASE																																					
10.13143/0cy5-d511	urn:nasa:pds:test20210512::1.0	Lunar Crustal Magnetic Field Map 20201203 Bundle	Draft	RELEASE																																					
DOI	Identifier	Title	Status	Action																																					
10.13143/8zrt-ra61	urn:nasa:pds:test20210529	Lunar Crustal Magnetic Field Map 20210529 Bundle	Draft	RELEASE																																					
10.13143/9p7y-by45	urn:nasa:pds:test20211006::1.0	Lunar Crustal Magnetic Field Map 20211006 collection	Draft	RELEASE																																					
10.13143/0cy5-d511	urn:nasa:pds:test20210512::1.0	Lunar Crustal Magnetic Field Map 20201203 Bundle	Draft	RELEASE																																					

🔍 ✕

1 result found

DOI	Identifier	Title	Status	Action
10.13143/8zrt-ra61	urn:nasa:pds:test20210529	Lunar Crustal Magnetic Field Map 20210529 Bundle	Draft	RELEASE

Step 4
Search with '?'

🔍 ✕

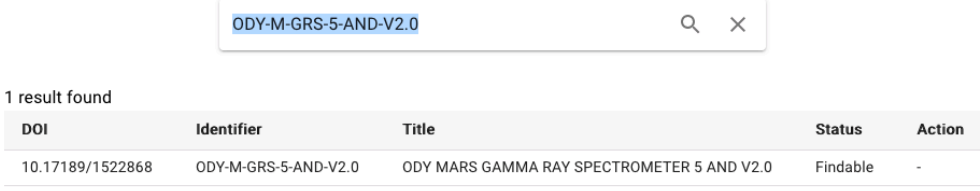
3 results found

DOI	Identifier	Title	Status	Action
10.13143/8zrt-ra61	urn:nasa:pds:test20210529	Lunar Crustal Magnetic Field Map 20210529 Bundle	Draft	RELEASE
10.13143/9p7y-by45	urn:nasa:pds:test20211006::1.0	Lunar Crustal Magnetic Field Map 20211006 collection	Draft	RELEASE
10.13143/0cy5-d511	urn:nasa:pds:test20210512::1.0	Lunar Crustal Magnetic Field Map 20201203 Bundle	Draft	RELEASE

Test ID	DOI.5
Issue ID	pds-doi-service#180
Issue Type	requirement
Issue Description	As an API user I want to filter on PDS3 Data Set IDs with wildcards
Comments	Pass
Test Plan	Same as pds-doi-service#177

Test ID	DOI.6
Issue ID	pds-doi-service#188
Issue Type	Defect
Issue Description	As a user, I want to make sure I can not override existing DOI with new LIDVID.
Comments	Pass
Test Steps	Create drafts with the same doi xml file, the server shouldn't allow this action. Create DOI with DOI2.xlsx using DOI-UI
Test Result	<div style="text-align: center; font-size: 10px; color: #800000;">CriticalDOIException</div> <p style="font-size: 8px; margin-top: 5px;">Description: There is already a DOI 10.13143/9p7y-by45 submitted for record identifier urn:nasa:pds:test20211006::1.0 (status=draft). You cannot update/remove a DOI for an existing record identifier.</p> <div style="text-align: center; margin-top: 10px;"> RETRY </div>

Test ID	DOI.7
Issue ID	pds-doi-service#192
Issue Type	requirement
Issue Description	As a user, I want the application to support the history of PDS's DOIs, especially the one created for PDS3 products

Comments	Pass										
Test Steps	<ol style="list-style-type: none"> 1. Login to https://pds-gamma.jpl.gov/doi 2. Enter “in the search box” 3. Press Enter 										
Test Result:	 <p>1 result found</p> <table border="1"> <thead> <tr> <th>DOI</th> <th>Identifier</th> <th>Title</th> <th>Status</th> <th>Action</th> </tr> </thead> <tbody> <tr> <td>10.17189/1522868</td> <td>ODY-M-GRS-5-AND-V2.0</td> <td>ODY MARS GAMMA RAY SPECTROMETER 5 AND V2.0</td> <td>Findable</td> <td>-</td> </tr> </tbody> </table>	DOI	Identifier	Title	Status	Action	10.17189/1522868	ODY-M-GRS-5-AND-V2.0	ODY MARS GAMMA RAY SPECTROMETER 5 AND V2.0	Findable	-
DOI	Identifier	Title	Status	Action							
10.17189/1522868	ODY-M-GRS-5-AND-V2.0	ODY MARS GAMMA RAY SPECTROMETER 5 AND V2.0	Findable	-							

Test ID	DOI.8
Issue ID	pds-doi-service#103
Issue Type	requirement
Issue Description	As the PDS, I want to mint DOIs through DataCite
Comments	<p>For more information on how to populate this new feature request, see the PDS Wiki on User Story Development:</p> <p>https://github.com/NASA-PDS/nasa-pds.github.io/wiki/Issue-Tracking#user-story-development</p>
Test Plan	There are seven child issues. #137; #236; #175; #174; #172; #171; #204

Test ID	DOI.10
Issue ID	pds-doi-service#236
Issue Type	requirement
Issue Description	Create Validator class for DataCite JSON Labels
Comments	Parent Issue
Test Plan	Test with child issues.

Test ID	DOI.11
Issue ID	pds-doi-service#175
Issue Type	requirement
Issue Description	As an operator, I want to update DOI metadata through DataCite
Comments	Pass
Test Steps	<p>Step 1. Draft a doi</p> <pre>gchen@dhcp-137-79-237-21 venv % ./bin/pds-doi-cmd draft -s gary.x.chen@jpl.nasa.gov -n eng -i ~/pds/pds4test.build12.0/testDoi/doi5.draft.xml > doi5out.json</pre> <p>Step 2. Modify doi5 with updated metadata</p>

	<p>Step 3. gchen@dhcp-137-79-237-21 venv % ./bin/pds-doi-cmd draft -s gary.x.chen@jpl.nasa.gov -n eng -i ~/pds/pds4test.build12.0/testDoi/doi5.draft.2.xml > doi5out2.json</p> <p>Step 4. gchen@dhcp-137-79-237-21 venv % diff doi5out.json doi5out2.json</p>
Test Results	<p>Step 4.</p> <pre> 43a44,49 > }, > { > "nameType": "Personal", > "name": "Gary Chen", > "nameIdentifiers": [>] 117c123 < "updated": "2021-10- 31T20:11:05.581228Z", --- > "updated": "2021-10- 31T20:14:14.386754Z", </pre>

Test ID	DOI.12
Issue ID	pds-doi-service#174
Issue Type	requirement
Issue Description	As an operator, I want to release a DOI through DataCite
Comments	Pass
Test Steps	<p>Step 1. Draft a doi</p> <pre> gchen@dhcp-137-79-237-21 venv % ./bin/pds-doi-cmd draft -s gary.x.chen@jpl.nasa.gov -n eng -i ~/pds/pds4test.build12.0/testDoi/doi5.draft.xml > doi5out.json </pre> <p>Step 2 release the doi</p> <pre> ~/pds/venv/bin/pds-doi-cmd release -s gary.x.chen@jpl.nasa.gov -n eng -i doi5.output.json </pre>

<p>Test Results</p>	<pre> Step 2: ProductType.Dataset: 'Dataset'>, product_type_specific='PDS4 Refereed Data Bundle', related_identifier='urn:nasa:pds:test20210512::', identifiers=[], authors=[{'name': 'L. L. Hood', 'name_type': 'Personal', 'name_identifiers': []}, {'name': 'C. B. Torres', 'name_type': 'Personal', 'name_identifiers': []}, {'name': 'J. S. Oliveira', 'name_type': 'Personal', 'name_identifiers': []}, {'name': 'M. A. Wieczorek', 'name_type': 'Personal', 'name_identifiers': []}, {'name': 'S. T. Steward', 'name_type': 'Personal', 'name_identifiers': []}], keywords={'prospector', 'engineering', 'PDS', 'altitude', 'vector', 'latitude', 'degree', 'field', 'crustal', 'bundle', 'contains', 'high', 'south', 'magnetometer', 'lp', 'quality', 'kaguya', '30', 'PDS4', '65', 'large-scale', 'moon', 'using', 'produced', 'spacecraft', 'map', 'km', 'data', 'mission', 'lunar', 'magnetic', 'selene', 'north', 'covering'}, editors=[], description='This bundle contains a large-scale map of the lunar crustal magnetic field at 30 km altitude covering latitudes from 65 degrees south to 65 degrees north. This map has been produced using high quality vector magnetometer data from Lunar Prospector and SELENE (Kaguya).', id='29743', doi='10.17189/29743', site_url='https://pds.nasa.gov/ds- view/pds/viewBundle.jsp?identifier=urn%3Anasa%3Apds%3Atest2021 0512&version=', publisher='NASA Planetary Data System', contributor='Engineering', status=<DoiStatus.Review: 'review'>, previous_status=None, message=None, date_record_added=datetime.datetime(2021, 10, 31, 19, 47, 36, 832031, tzinfo=tzutc()), date_record_updated=datetime.datetime(2021, 10, 31, 19, 47, 36, 832031, tzinfo=tzutc()), event=None),https://pds.nasa.gov/ds- view/pds/viewBundle.jsp?identifier=urn%3Anasa%3Apds%3Atest2021 0512&version= DEBUG pds_doi_service.core.outputs.doi_validator:_check_field_site_u rl_from_request status_code,site_url: 200,https://pds.nasa.gov/ds- view/pds/viewBundle.jsp?identifier=urn%3Anasa%3Apds%3Atest2021 0512&version= DEBUG pds_doi_service.core.outputs.doi_validator:_check_field_site_u rl_site_url https://pds.nasa.gov/ds- view/pds/viewBundle.jsp?identifier=urn%3Anasa%3Apds%3Atest2021 0512&version= indeed exists DEBUG pds_doi_service.core.db.doi_database:parse_criteria Calling get_query_criteria_title with value ['Lunar Crustal Magnetic Field Map 20210601 Bundle'] </pre>
---------------------	--

```

DEBUG pds_doi_service.core.db.doi_database:parse_criteria
criteria_str: AND lower(title) IN (:title_0)
DEBUG pds_doi_service.core.db.doi_database:parse_criteria
dict_entry: {'title_0': 'lunar crustal magnetic field map
20210601 bundle'}
DEBUG pds_doi_service.core.db.doi_database:select_latest_rows
SELECT query_string: SELECT * from doi WHERE is_latest=1 AND
lower(title) IN (:title_0) ORDER BY date_updated
DEBUG pds_doi_service.core.db.doi_database:select_latest_rows
Query returned 1 result(s)
DEBUG
pds_doi_service.core.outputs.doi_validator:_check_field_title_
content product_type_specific_suffix: Bundle
DEBUG
pds_doi_service.core.outputs.doi_validator:_check_field_title_
content doi.title: Lunar Crustal Magnetic Field Map 20210601
Bundle
DEBUG pds_doi_service.core.db.doi_database:parse_criteria
Calling get_query_criteria_ids with value
['urn:nasa:pds:test20210512::']
DEBUG
pds_doi_service.core.db.doi_database:_form_query_with_wildcard
s WHERE subclause: AND (identifier IN (:identifier_0) )
DEBUG pds_doi_service.core.db.doi_database:parse_criteria
criteria_str: AND (identifier IN (:identifier_0) )
DEBUG pds_doi_service.core.db.doi_database:parse_criteria
dict_entry: {'identifier_0': 'urn:nasa:pds:test20210512::'}
DEBUG pds_doi_service.core.db.doi_database:select_latest_rows
SELECT query_string: SELECT * from doi WHERE is_latest=1 AND
(identifier IN (:identifier_0) ) ORDER BY date_updated
DEBUG pds_doi_service.core.db.doi_database:select_latest_rows
Query returned 1 result(s)
INFO pds_doi_service.core.db.doi_database:create_connection
Connecting to SQLite3 (ver 2.6.0) database
/Users/gchen/pds/venv/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_ids with value
['urn:nasa:pds:test20210512::']

```

```

DEBUG
pds_doi_service.core.db.doi_database:_form_query_with_wildcard
s WHERE subclause: AND (identifier IN (:identifier_0) )
DEBUG pds_doi_service.core.db.doi_database:parse_criteria
criteria_str: AND (identifier IN (:identifier_0) )
DEBUG pds_doi_service.core.db.doi_database:parse_criteria
dict_entry: {'identifier_0': 'urn:nasa:pds:test20210512::'}
DEBUG pds_doi_service.core.db.doi_database:select_latest_rows
SELECT query_string: SELECT * from doi WHERE is_latest=1 AND
(identifier IN (:identifier_0) ) ORDER BY date_updated
DEBUG pds_doi_service.core.db.doi_database:select_latest_rows
Query returned 1 result(s)
DEBUG pds_doi_service.core.outputs.transaction_logger:write
transaction_dir /Users/gchen/pds/venv/transaction_history
INFO pds_doi_service.core.outputs.transaction_logger:write
transaction files saved in
/Users/gchen/pds/venv/transaction_history/eng/2021-10-
31T19:48:58.594347
DEBUG
pds_doi_service.core.db.doi_database:query_string_for_is_lates
t_update UPDATE o_query_string: UPDATE doi SET is_latest = 0
WHERE identifier = ?;
DEBUG
pds_doi_service.core.db.doi_database:query_string_for_transact
ion_insert INSERT o_query_string: INSERT INTO doi
(identifier,doi,status,title,submitter,type,subtype,node_id,da
te_added,date_updated,transaction_key,is_latest) VALUES
(?,?,?,?,?,?,?,?,?,?,?,?,?)
...
    
```

Test ID	DOI.13
Issue ID	pds-doi-service#172
Issue Type	requirement
Issue Description	As an operator, I want query for one or more minted DOIs from DataCite
Comments	Pass
Test Steps	<ol style="list-style-type: none"> 1. Install doi-service 2. Configure doi-service to use DataCite in the config file. 3. query with doi-service <ol style="list-style-type: none"> a. pds-doi-cmd list
Test Results	<p>Step 2: [SERVICE] # Should be set to DataCite (case-insensitive) provider = datacite</p> <p>[DATACITE] # Select the appropriate URL endpoint for either a test or production deployment</p>

<pre> url = https://api.test.datacite.org/does #url = https://api.datacite.org/does user = DEV.FHPUQW password = pdsen\$1234 doi_prefix = 10.13143 validate_against_schema = True [OSTI] # This section is kept for posterity, but should be ignored as OSTI is no longer a supported endpoint url = https://www.osti.gov/iad2test/api/records #url = https://www.osti.gov/iad2/api/records user = <ask pds-operator@jpl.nasa.gov> password = <ask pds-operator@jpl.nasa.gov> doi_prefix = 10.17189 validate_against_schema = True [PDS4_DICTIONARY] url = https://pds.nasa.gov/pds4/pds/v1/PDS4_PDS_JSON_1D00.JSON pds_node_identifier = 0001_NASA_PDS_1.pds.Node.pds.name [LANDING_PAGES] # template url, arguments are # 1) product_class suffix, after _ # 2) lid # 3) vid url = https://pds.nasa.gov/ds-view/pds/view {}.jsp?identifier={}&version={} [OTHER] logging_level = DEBUG doi_publisher = NASA Planetary Data System global_keyword_values = PDS; PDS4; pds_uri = http://pds.nasa.gov/pds4/pds/v1 transaction_dir = ./transaction_history db_file = doi.db db_table = doi api_host = 0.0.0.0 api_port = 8080 api_valid_referrers = emailer_local_host = localhost emailer_port = 25 emailer_sender = pdsen-doi-test@jpl.nasa.gov emailer_receivers = pdsen-doi-test@jpl.nasa.gov Step 3: </pre>
--

	<pre> DEBUG pds_doi_service.core.actions.list:run o_select_result: [{"identifier": "urn:nasa:pds:test20210529", "doi": "10.13143/27qn-ss05", "status": "draft", "title": "Lunar Crustal Magnetic Field Map 20210529 Bundle", "submitter": "gary.x.chen@jpl.nasa.gov", "type": "Collection", "subtype": "PDS4 Bundle", "node_id": "eng", "date_added": "2021-10-06T03:51:36+08:00", "date_updated": "2021-10-06T03:51:36+08:00", "transaction_key": "/Library/Frameworks/Python.framework/Versions/3.9/transaction_history/eng/2 021-10-05T20:51:35.471702", "is_latest": 1}] [{"identifier": "urn:nasa:pds:test20210529", "doi": "10.13143/27qn-ss05", "status": "draft", "title": "Lunar Crustal Magnetic Field Map 20210529 Bundle", "submitter": "gary.x.chen@jpl.nasa.gov", "type": "Collection", "subtype": "PDS4 Bundle", "node_id": "eng", "date_added": "2021-10-06T03:51:36+08:00", "date_updated": "2021-10-06T03:51:36+08:00", "transaction_key": "/Library/Frameworks/Python.framework/Versions/3.9/transaction_history/eng/2 021-10-05T20:51:35.471702", "is_latest": 1}] </pre>
--	---

Test ID	DOI.14
Issue ID	pds-doi-service#171
Issue Type	requirement
Issue Description	As an operator, I want to reserve a DOI through DataCite
Comments	Pass
Test Steps	<ol style="list-style-type: none"> 1. Install doi-service 2. Configure doi-service to use DataCite in the config file. 3. Reserve with doi-service <ol style="list-style-type: none"> a. Cd testDoi b. pds-doi-cmd reserve -n eng -i doi6.csv -sgchen@jpl.nasa.gov 4. % pds-doi-cmd list
Test Result	<p>Step 2:</p> <p>Step 3:</p> <pre> INFO pds_doi_service.core.cmd.pds_doi_cmd:main run_dir /Users/gchen/pds/pds4test.build12.0/testDoi DEBUG pds_doi_service.core.outputs.service:get_doi_record_service Returning instance of DOIDataCiteRecord for service type datacite DEBUG pds_doi_service.core.outputs.service:get_doi_record_service Returning instance of DOIDataCiteRecord for service type datacite DEBUG pds_doi_service.core.outputs.service:get_validator_service Returning instance of DOIDataCiteValidator for service type datacite DEBUG pds_doi_service.core.outputs.service:get_web_client_service Returning instance of DOIDataCiteWebClient for service type datacite DEBUG pds_doi_service.core.actions.action:parse_arguments input = doi6.xlsx DEBUG pds_doi_service.core.actions.action:parse_arguments node = eng </pre>

```

DEBUG pds_doi_service.core.actions.action:parse_arguments submitter =
gary.x.chen@jpl.nasa.gov
DEBUG pds_doi_service.core.actions.action:parse_arguments dry_run = False
DEBUG pds_doi_service.core.actions.action:parse_arguments force = False
INFO pds_doi_service.core.input.input_util:_read_from_path Reading local file
path doi6.xlsx
INFO pds_doi_service.core.input.input_util:parse_xls_file Parsing xls file
doi6.xlsx
DEBUG pds_doi_service.core.input.input_util:parse_xls_file num_cols: 7
DEBUG pds_doi_service.core.input.input_util:parse_xls_file num_rows: 1
DEBUG pds_doi_service.core.input.input_util:parse_xls_file data columns:
['status', 'title', 'publication_date', 'product_type_specific', 'author_last_name',
'author_first_name', 'related_resource']
DEBUG pds_doi_service.core.input.input_util:_parse_rows_to_dois row status
Reserved
title           Lunar Crustal Magnetic Field Map 20210529 Bundle
publication_date          2021-05-29 00:00:00
product_type_specific    PDS4 Bundle
author_last_name        Chen
author_first_name       Gary
related_resource         urn:nasa:pds:test20210529
Name: 0, dtype: object
identifier,doi,status,title,submitter,type,subtype,node_id,date_added,date_updated,t
ransaction_key,is_latest) VALUES (?, ?, ?, ?, ?, ?, ?, ?, ?, ?, ?)
{
  "data":
  {
    "id": "10.13143/27qn-ss05",
    "type": "dois",
    "attributes": {
      "doi": "10.13143/27qn-ss05",
      "suffix": "27qn-ss05",
      "identifiers": [
        {
          "identifier": "10.13143/27qn-ss05",
          "identifierType": "DOI"
        }
      ],
      "creators": [
        {
          "nameType": "Personal",
          "name": "Gary Chen",
          "nameIdentifiers": [
            ]
          }
        ]
      }
    }
  ],

```

```

        "titles": [
          {
            "title": "Lunar Crustal Magnetic Field Map 20210529 Bundle",
            "lang": "en"
          }
        ],
        "publisher": "NASA Planetary Data System",
        "publicationYear": "2021",
        "subjects": [
        ],
        "contributors": [
          {
            "nameType": "Organizational",
            "name": "Planetary Data System: Engineering Node",
            "contributorType": "DataCurator"
          }
        ],
        "types": {
          "resourceTypeGeneral": "Collection",
          "resourceType": "PDS4 Bundle"
        },
        "relatedIdentifiers": [
          {
            "relatedIdentifier": "urn:nasa:pds:test20210529",
            "relatedIdentifierType": "URN",
            "relationType": "IsIdenticalTo"
          }
        ],
        "created": "2021-10-06T03:51:36.000000Z",
        "updated": "2021-10-06T03:51:36.000000Z",
        "state": "draft",
        "language": "en",
        "schemaVersion": "http://datacite.org/schema/kernel-4"
      }
    }
  }
}
Step 4:
DEBUG pds_doi_service.core.actions.list:run o_select_result: [{"identifier":
"urn:nasa:pds:test20210529", "doi": "10.13143/27qn-ss05", "status": "draft",
"title": "Lunar Crustal Magnetic Field Map 20210529 Bundle", "submitter":
"gary.x.chen@jpl.nasa.gov", "type": "Collection", "subtype": "PDS4 Bundle",
"node_id": "eng", "date_added": "2021-10-06T03:51:36+08:00", "date_updated":
"2021-10-06T03:51:36+08:00", "transaction_key":
"/Library/Frameworks/Python.framework/Versions/3.9/transaction_history/eng/202
1-10-05T20:51:35.471702", "is_latest": 1}]

```

	[{"identifier": "urn:nasa:pds:test20210529", "doi": "10.13143/27qn-ss05", "status": "draft", "title": "Lunar Crustal Magnetic Field Map 20210529 Bundle", "submitter": "gary.x.chen@jpl.nasa.gov", "type": "Collection", "subtype": "PDS4 Bundle", "node_id": "eng", "date_added": "2021-10-06T03:51:36+08:00", "date_updated": "2021-10-06T03:51:36+08:00", "transaction_key": "/Library/Frameworks/Python.framework/Versions/3.9/transaction_history/eng/2021-10-05T20:51:35.471702", "is_latest": 1}]
--	--

Test ID	DOI.16
Issue ID	pds-doi-service#191
Issue Type	defect
Issue Description	API accepts Reserve submissions with invalid LIDVIDs
Comments	Pass
Test Steps	<ol style="list-style-type: none"> 1. Fill in Excel template with reserve information, left column G blank. 2. Connect to the API with <code>ssh -L 8085:localhost:8080 pds-dev3</code>, start local instance of DOI UI with <code>npm start</code> from root folder of https://github.com/NASA-PDS/pds-doi-ui/tree/search-metadata (currently not merged into master branch), and go to <code>localhost:3000</code> in your browser 3. Click on 'Reserve' in the top right 4. Upload file from step 1, fill in or select values for Submitter Email and Node, and click 'Reserve' button at bottom 5. If submission is fail, the error message should be meaningful.
Test Result:	<p style="text-align: center; margin: 0;">InputFormatException</p> <p style="font-size: small; margin: 0;">Description: Failed to parse row 1 of the provided spreadsheet. Reason: No value provided for related_resource column Row: ['Reserved', 'Lunar Crustal Magnetic Field Map 20211024 collection', '2024-10-06', 'PDS4 Collection', 'Chen', 'Gary', '']</p>

Test ID	DOI.17
Issue ID	pds-doi-service#220
Issue Type	Enhancement
Issue Description	CI does not work on main branch for dev release
Comments	SKIP
Test Plan	See action https://github.com/NASA-PDS/pds-doi-service/runs/2955493255?check_suite_focus=true

Test ID	DOI.18
Issue ID	pds-doi-service#247
Issue Type	Enhancement
Issue Description	Fix test failure with flask_testing module
Comments	Pass
Test Steps	See https://github.com/NASA-PDS/pds-doi-service/runs/3664070311?check_suite_focus=true#step:6:121
Test Result	Resolved as #64 #65 Summary

	<p>Merge this to resolve #64 by having the Roundup try <code>pip install --editable .[dev] && tox</code> first and then <code>python setup.py test</code> second in order to run <code>unit+functional+integration+acceptance+user+...</code> tests.</p> <p>Note that there's a pull request that must be merged and a new GitHub Actions Base published to Docker Hub before this can be merged.</p>
--	---

Test ID	DOI.20
Issue ID	pds-doi-service#183
Issue Type	requirement
Issue Description	As a user of the API, I want to see the DOI's title when I go GET /dois request
Comments	Pass
Test Steps	<p>Step 1: reserve a doi</p> <p>Step 2: % ~/pds/venv/bin/pds-doi-cmd list</p> <p>Step 3:</p> <p>expect to get the 'title' attribute for each doi is the result.</p>
Test Result:	<pre>{ "identifier": "urn:nasa:pds:test20211006::1.0", "doi": "10.13143/9p7y-by45", "status": "draft", "title": "Lunar Crustal Magnetic Field Map 20211006 collection", "submitter": "gxchen@jpl.nasa.gov", "type": "Collection", "subtype": "PDS4 Collection", "node_id": "eng", "date_added": "2021-10-17T17:15:30+08:00", "date_updated": "2021-10-17T17:15:30+08:00", "transaction_key": "/Users/gchen/pds/venv/transaction_history/eng/2021-10-17T10:15:29.821249", "is_latest": 1, "identifier": "urn:nasa:pds:test20210512::1.0", "doi": "10.13143/0cy5-d511", "status": "draft", "title": "Lunar Crustal Magnetic Field Map 20201203 Bundle", "submitter": "gxchen@jpl.nasa.gov", "type": "Collection", "subtype": "PDS4 Bundle", "node_id": "eng", "date_added": "2021-10-17T18:02:38+08:00", "date_updated": "2021-10-17T18:02:38+08:00", "transaction_key": "/Users/gchen/pds/venv/transaction_history/eng/2021-10-17T11:02:37.949203", "is_latest": 1 }</pre>

Test ID	DOI.21
Issue ID	pds-doi-service#184
Issue Type	requirement
Issue Description	As an API user, I want to always have an update date for the DOIs

Comments	Pass
Test Plan	Step 1: reserve a doi Step 2: % ~/pds/venv/bin/pds-doi-cmd list Step 3: Check if updated date = date_added.
Test Result	<pre>{ "identifier": "urn:nasa:pds:test20211006::1.0", "doi": "10.13143/9p7y-by45", "status": "draft", "title": "Lunar Crustal Magnetic Field Map 20211006 collection", "submitter": "gxchen@jpl.nasa.gov", "type": "Collection", "subtype": "PDS4 Collection", "node_id": "eng", "date_added": "2021-10-17T17:15:30+08:00", "date_updated": "2021-10-17T17:15:30+08:00", "transaction_key": "/Users/gchen/pds/venv/transaction_history/eng/2021-10-17T10:15:29.821249", "is_latest": 1, "identifier": "urn:nasa:pds:test20210512::1.0", "doi": "10.13143/0cy5-d511", "status": "draft", "title": "Lunar Crustal Magnetic Field Map 20201203 Bundle", "submitter": "gxchen@jpl.nasa.gov", "type": "Collection", "subtype": "PDS4 Bundle", "node_id": "eng", "date_added": "2021-10-17T18:02:38+08:00", "date_updated": "2021-10-17T18:02:38+08:00", "transaction_key": "/Users/gchen/pds/venv/transaction_history/eng/2021-10-17T11:02:37.949203", "is_latest": 1} </pre>

Test ID	DOI.22
Issue ID	pds-doi-service#198
Issue Type	requirement
Issue Description	As a user, I want to use the API with ids containing a slash (/)
Comments	pds-doi-ui client will encode all / characters as * and pass to DOI service
Test Plan	Step 1: log into pds-gamma.jpl.nasa.gov.doi Step 2: enter 'CO/SR/RSS/4//5/OCC/V2.0' into the search box Step 3: press Enter
Test Result	

Test ID	DOI.23
Issue ID	pds-doi-service#228
Issue Type	requirement

Issue Description	As an administrator of the application, I want to restrict access to API by specific referrer
Comments	Pass
Test Plan	Step 1. Log in to doi at https://pds-gamma.jpl.nasa.gov/doi/#/home Step 2. Open inspector/console
Test Result	Step 2 The browser pops up the login menu

Test ID	DOI.24
Issue ID	pds-doi-service#162
Issue Type	Enhancement
Issue Description	Implement Application Server to wrap Flask service
Comments	Pass
Test Plan	When the API server is started in command line, no message says that the current implementation is not suitable for a production environment. gchen@Johns-MacBook-Pro venv % bin/pds-doi-api
Test Result	INFO pds_doi_service.api.__main__:main Logging system configured at level DEBUG [nltk_data] Error loading stopwords: <urlopen error [SSL: [nltk_data] CERTIFICATE_VERIFY_FAILED] certificate verify failed: [nltk_data] unable to get local issuer certificate (_ssl.c:1129)> [nltk_data] Error loading wordnet: <urlopen error [SSL: [nltk_data] CERTIFICATE_VERIFY_FAILED] certificate verify failed: [nltk_data] unable to get local issuer certificate (_ssl.c:1129)> WARNING connexion.operations.openapi3:body_definition this operation accepts multiple content types, using application/json WARNING connexion.operations.openapi3:body_definition this operation accepts multiple content types, using application/json WARNING connexion.operations.openapi3:body_definition this operation accepts multiple content types, using application/json

	<p>WARNING connexion.operations.openapi3:body_definition this operation accepts multiple content types, using application/json INFO pds_doi_service.api.__main__:main Waitress logging configured at level DEBUG INFO waitress:log_info Serving on http://0.0.0.0:8085</p>
--	---

Test ID	DOI.25														
Issue ID	pds-doi-service#227														
Issue Type	Enhancement														
Issue Description	Update DOI service for handling existing DOIs acceptance criteria														
Comments	Pass														
Test Step	This is mostly prevented by the DOI UI. A user could create their own DOI, but the system will catch if it a new DOI for the same LIDVID, so that is sufficient details. Reserve an existing doi in doi-ui.														
Test Result	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Status</th> <th>Title</th> <th>Publication Date</th> <th>Product Type</th> <th>Author Last Name</th> <th>Author First Name</th> <th>Author Related Resource</th> </tr> </thead> <tbody> <tr> <td>Reserved</td> <td>Lunar Crustal Magnetic Field Map 20211006 collection</td> <td>2021-10-06</td> <td>PDS4 Collection</td> <td>Chen</td> <td>Gary</td> <td>urn:nasa:pds:test20211006:1.0</td> </tr> </tbody> </table> <div style="background-color: #f8d7da; padding: 10px; margin-top: 10px;"> <p style="text-align: center; margin: 0;">CriticalDOIException</p> <p style="font-size: small; margin: 0;">Description: There is already a DOI 10.13143/9p7y-by45 submitted for record identifier urn:nasa:pds:test20211006:1.0 (status=draft). You cannot update/remove a DOI for an existing record identifier.</p> <p style="text-align: center; margin-top: 10px;"><input type="button" value="RETRY"/></p> </div>	Status	Title	Publication Date	Product Type	Author Last Name	Author First Name	Author Related Resource	Reserved	Lunar Crustal Magnetic Field Map 20211006 collection	2021-10-06	PDS4 Collection	Chen	Gary	urn:nasa:pds:test20211006:1.0
Status	Title	Publication Date	Product Type	Author Last Name	Author First Name	Author Related Resource									
Reserved	Lunar Crustal Magnetic Field Map 20211006 collection	2021-10-06	PDS4 Collection	Chen	Gary	urn:nasa:pds:test20211006:1.0									

Test ID	DOI.26
Issue ID	pds-doi-service#229
Issue Type	Enhancement
Issue Description	As a user, I want to see the PDS3 ids as they originally are
Comments	Pass
Test Steps	perform a search request with PDS3 dois having / in them expect the results do show their id with the original / Step 1: log in to https://pds-gamma.jpl.nasa.gov/doi Step 2: enter CO/SR in the search box Step 3: press enter.

Test Result	<input type="text" value="CO/SR"/> <input type="button" value="Q"/> <input type="button" value="X"/>				
	3 results found				
	DOI	Identifier	Title	Status	Action
	10.17189/1522417	CO-SR-RSS-4/5-OCC-V2.0	CASSINI SATURN RSS RING OCC2005-2010	Findable	-
10.17189/1522418	CO-SR-UVIS-HSP-2/4-OCC-V2.0	CASSINI ORBITER SATURN UVIS STELLAR RING OCC 2004-2017	Findable	-	
10.17189/1522419	CO-SR-VIMS-4/5-OCC-V2.1	CASSINI SATURN VIMS RING OCC 2005-2009	Findable	-	

Test ID	DOI-UI.1
Issue ID	pds-doi-ui#22
Issue Type	enhancement
Issue Description	Reserve DOI UI forms.
Comments	Pass
Test Steps	<ol style="list-style-type: none"> 1. Reserve xls spreadsheet using the ‘reserve’ form 2. After successful submission, there should be away to go back to the reserve form. 3. Click on “CERATE A NEW DOI”
Test Result	<div style="background-color: #e0f2f1; padding: 10px; text-align: center;"> <p>Submission Successful!</p> <p>Your DOI for is 10.13143/9p7y-by45</p> <p>Once your data is online and registered, release your DOI here.</p> <p>Or</p> <p><input type="button" value="CREATE A NEW DOI"/></p> </div> <p>Step 3: Back to the create page: http://localhost:5000/#/create</p>

Test ID	DOI-UI.2
Issue ID	pds-doi-ui#35
Issue Type	Defect
Issue Description	As a SA, I don’t want security vulnerabilities in the public UI
Comments	Partially pass
Test Steps	<p>Step 1:</p> <pre>gchen@Johns-MacBook-Pro pds % mkdir pds-doi-ui-build gchen@Johns-MacBook-Pro pds % cd pds-doi-ui-build gchen@Johns-MacBook-Pro pds-doi-ui-build % ll gchen@Johns-MacBook-Pro pds-doi-ui-build % git clone https://github.com/NASA-PDS/pds-doi-ui.git</pre> <p>Step 2: Npm install</p>
Test Results:	Step 2:

	<p>added 2211 packages, and audited 2212 packages in 38s</p> <p>143 packages are looking for funding run `npm fund` for details</p> <p>66 vulnerabilities (22 moderate, 41 high, 3 critical)</p> <p>To address issues that do not require attention, run: npm audit fix</p> <p>To address all issues (including breaking changes), run: npm audit fix -force</p> <p>Run `npm audit` for details.</p>
--	--

Test ID	DOI-UI.3
Issue ID	pds-doi-ui#70
Issue Type	Defect
Issue Description	navigation issue when using the app bar
Comments	Pass
Test Steps	<ol style="list-style-type: none"> 1. Click on Create DOI 2. Click on dropdown box for Find a node. 3. Click on Planetary Plasma Interactiosn(PPI) 4. After loading PPI, click on the back button.
Test Results:	<p>Step 3: directed to https://pds-ppi.igpp.ucla.edu/</p> <p>Step 4: back to http://localhost:5000/#/create</p>

Test ID	DOI-UI.4
Issue ID	pds-doi-ui#25
Issue Type	requirement
Issue Description	As a user, I want to search for a DOI and associated metadata by LID/LIDVID.
Comments	Pass
Test Steps	<p>Step 1: search for '*urn:nasa:pds:insight_cameras:calibration'</p> <p>Step 2: search for 'lab_shocked_feldspars'</p> <p>Step 3: search for 'insight_cameras'</p>
Test Result	Step 1:

🔍 ✕

1 result found

DOI	Identifier	Title	Status	Action
10.17189/1510486	urn:nasa:pds:insight_cameras:calibration::1.0	Collection of calibration products: PDS4 InSight Cameras Experiment Data Record (EDR) and Reduced Data Record (RDR) Data Products	Findable	↓

Step 2:

🔍 ✕

2 results found

DOI	Identifier	Title	Status	Action
10.17189/1518490	urn:nasa:pds:lab_shocked_feldspars::2.0	Laboratory Shocked Feldspars Bundle	Findable	-
10.17189/1522545	urn:nasa:pds:lab_shocked_feldspars_test1::10.0	Laboratory Shocked Feldspars Bundle #3	Findable	↓

Step 3:

🔍 ✕

8 results found

DOI	Identifier	Title	Status	Action
10.17189/1510485	urn:nasa:pds:insight_cameras:browse::1.0	Collection of browse products: PDS4 InSight Cameras Experiment Data Record (EDR) and Reduced Data Record (RDR) Data Products	Findable	-
10.17189/1510487	urn:nasa:pds:insight_cameras:data::1.0	Collection of data products: PDS4 InSight Cameras Experiment Data Record (EDR) and Reduced Data Record (RDR) Data Products	Findable	-
10.17189/1510488	urn:nasa:pds:insight_cameras:document::1.0	Collection of document products: PDS4 InSight Cameras Experiment Data Record (EDR) and Reduced Data Record (RDR) Data Products	Findable	-
10.17189/1510489	urn:nasa:pds:insight_cameras:miscellaneous::1.0	Collection of miscellaneous products: PDS4 InSight Cameras Experiment Data Record (EDR) and Reduced Data Record (RDR) Data Products	Findable	-
10.17189/1510490	urn:nasa:pds:insight_cameras:xml_schema::1.0	Collection of schema products: PDS4 InSight Cameras Experiment Data Record (EDR) and Reduced Data Record (RDR) Data Products	Findable	-
10.17189/1510486	urn:nasa:pds:insight_cameras:calibration::1.0	Collection of calibration products: PDS4 InSight Cameras Experiment Data Record (EDR) and Reduced Data Record (RDR) Data Products	Findable	-
10.17189/1522577	urn:nasa:pds:insight_cameras::1.0	InSight Cameras Bundle	Findable	-
-	urn:nasa:pds:insight_cameras_test11::1.0	InSight Cameras Bundle TEST 12	Draft	RELEASE

Test ID	DOI-UI.5
Issue ID	pds-doi-ui#34
Issue Type	requirement
Issue Description	As a user, I want to see the error/warnings messages on the same page from where they were raised.
Comments	Pass
Test Steps	<ol style="list-style-type: none"> 1. Go to the Create DOI page 2. Enter email and Node. 3. Browse to DOI1.xlsx 4. Click “reserve”

Test Result:	<input type="button" value="Browse..."/> DOI1.xlsx													
	<table border="1"> <thead> <tr> <th>Status</th> <th>Title</th> <th>Publication Date</th> <th>Product Type</th> <th>Author Last Name</th> <th>Author First Name</th> <th>Author Related Resource</th> </tr> </thead> <tbody> <tr> <td>Reserved</td> <td>Lunar Crustal Magnetic Field Map 20211006 Bundle</td> <td>2021-10-06</td> <td>PDS4 Collection</td> <td>Chen</td> <td>Gary</td> <td>urn:nasa:pds:test20211006:1.0</td> </tr> </tbody> </table> <div style="background-color: #f8d7da; padding: 10px; margin-top: 10px;"> <p style="text-align: center; font-size: small;">CriticalDOIException</p> <p style="font-size: x-small;">Description: There is already a DOI 10.13143/9p7y-by45 submitted for record identifier urn:nasa:pds:test20211006:1.0 (status=draft). You cannot update/remove a DOI for an existing record identifier.</p> </div> <div style="text-align: center; margin-top: 10px;"> <input type="button" value="RETRY"/> </div>	Status	Title	Publication Date	Product Type	Author Last Name	Author First Name	Author Related Resource	Reserved	Lunar Crustal Magnetic Field Map 20211006 Bundle	2021-10-06	PDS4 Collection	Chen	Gary
Status	Title	Publication Date	Product Type	Author Last Name	Author First Name	Author Related Resource								
Reserved	Lunar Crustal Magnetic Field Map 20211006 Bundle	2021-10-06	PDS4 Collection	Chen	Gary	urn:nasa:pds:test20211006:1.0								

Test ID	DOI-UI.6
Issue ID	pds-doi-ui#41
Issue Type	requirement
Issue Description	As a user, I want to acquire a DOI for a PDS4 product prior to it's public release of the data.
Comments	Pass
Test Steps	<p>Given a draft PDS4 product, I want to get a DOI for the product prior to peer review</p> <p>Step 1. When I perform a request to get a DOI for data that is not yet publicly available Then I expect the interface to prompt the user to "reserve a DOI"</p> <p>Step 2. Then I expect the interface to prompt the user to input the expected metadata to reserve a DOI</p> <p>Step 3. Then I expect to submit the required metadata to the DOI service</p> <p>Step 4. Then I expect to receive a prompt as to whether or not the submissions was successful</p> <p>Step 5. Then I expect to receive a prompt with the newly acquired DOI or information on how I will receive that information</p>
Test Result:	<p>Step 1 & 2.</p> <div style="text-align: center;"> <p>Has the data been registered and made publicly available? ⓘ</p> <p><input type="radio"/> Yes <input checked="" type="radio"/> No</p> <p>Download and complete this Excel file. Once completed, upload it using the field below:</p> <p><input type="button" value="Browse..."/> No file selected.</p> <p><input type="button" value="RESERVE"/></p> <p><input type="checkbox"/> Ignore warnings</p> </div> <p>Step 3.</p>

DOI2.xlsx

Status	Title	Publication Date	Product Type	Author Last Name	Author First Name	Author Related Resource
Reserved	Lunar Crustal Magnetic Field Map 20211006 collection	2021-10-06	PDS4 Collection	Chen	Gary	urn:nasa:pds:test20211006:1.0

Ignore warnings

Step 4 & 5

Submission Successful!

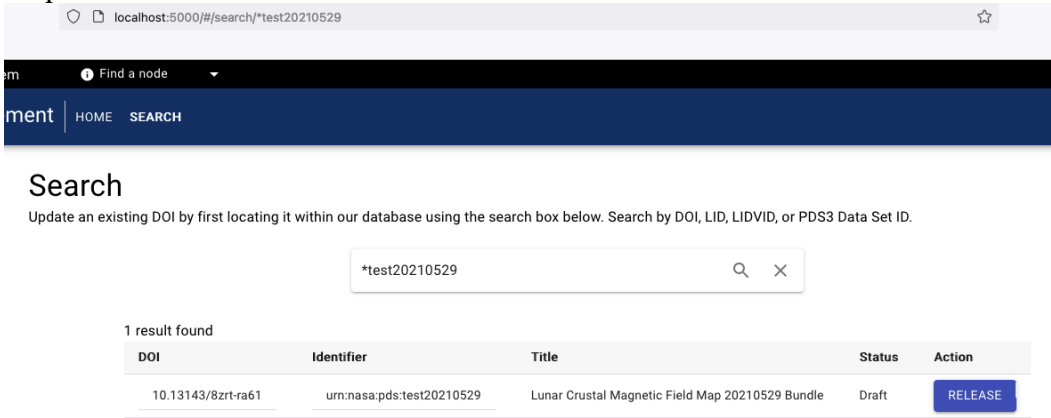
Your DOI for is **10.13143/8rvx-y675**

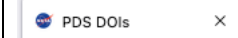
Once your data is online and registered, [release your DOI here.](#)

Or

Test ID	DOI-UI.7
Issue ID	pds-doi-ui#42
Issue Type	requirement
Issue Description	As a user, I want to acquire a DOI for a PDS4 product that has been registered and is publicly accessible
Comments	Fail – This part of doi-ui is not fully ready for testing.
Test Plan	<p>Given an PDS4 product that has been registered, a landing page exists, and the data is available publicly online</p> <p>When I perform a request to get a new DOI</p> <p>Then I expect to be prompted to "release a new DOI"</p> <p>Then I expect to be prompted to input the expected metadata to release a DOI</p> <p>Then I expect to submit the required metadata to the DOI service</p> <p>Then I expect to receive a notification as to the status of the request</p> <p>Then I expect a DOI to be displayed, or information on how I will receive that DOI</p> <p>Then I expect the information I entered to be saved in a draft state until it is released</p> <p>Given an PDS4 product that has not been registered, a landing page does not exist, or the data is not publicly accessible</p> <p>When I perform a request to get a DOI</p> <p>Then I expect to be prompted to "release a new DOI"</p> <p>Then I expect to be prompted to input the expected metadata to release a DOI</p> <p>Then I expect to submit the required metadata to the DOI service</p> <p>Then I expect to receive a prompt that the DOI request has failed do to the lack of landing page / public accessibility of the data.</p>

	Then I expect the information I entered to be saved in a draft state until it is released
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Test ID	DOI-UI.8
Issue ID	pds-doi-ui#65
Issue Type	enhancement
Issue Description	As a user, I want my search criteria to persist in the URL.
Comments	Pass
Test Steps	<ol style="list-style-type: none"> 1. Go to search page: http://localhost:5000/#/search 2. Enter *test20210529 in search box 3. click “Enter” 4. Check url bar, it should include the search term.
Test Result	<p>Step 4:</p> 

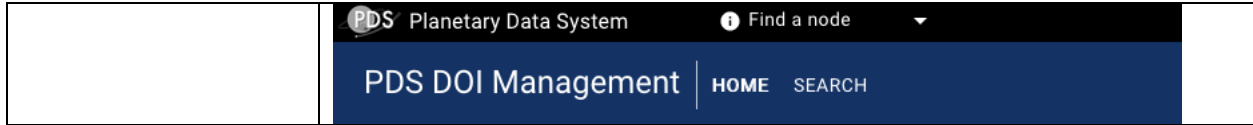
Test ID	DOI-UI.9
Issue ID	pds-doi-ui#71
Issue Type	enhancement
Issue Description	As a user, I want to have a dedicated favicon for the service.
Comments	Pass
Test Result:	

Test ID	DOI-UI.10
Issue ID	pds-doi-ui#1
Issue Type	enhancement
Issue Description	Reserve DOI UI forms.
Comments	Pass
Test Steps	<ol style="list-style-type: none"> 1. Go to the Create DOI page 2. Enter email and Node.

	<ol style="list-style-type: none"> 3. Browse to DOI5.xlsx 4. Click “reserve” 5. Check reserve statuses 														
Test Results	<p>Step 5:</p> <table border="1"> <thead> <tr> <th>Status</th> <th>Title</th> <th>Publication Date</th> <th>Product Type</th> <th>Author Last Name</th> <th>Author First Name</th> <th>Author Related Resource</th> </tr> </thead> <tbody> <tr> <td>Reserved</td> <td>Lunar Crustal Magnetic Field Map 20201203 Bundle</td> <td>2021-05-12</td> <td>PDS4 Bundle</td> <td>Chen</td> <td>Gary</td> <td>urn:nasa:pds:test20210512::1.0</td> </tr> </tbody> </table> <div style="background-color: #e0f2f1; padding: 10px; text-align: center;"> <p>Submission Successful!</p> <p>Your DOI for is 10.13143/0cy5-d511</p> <p>Once your data is online and registered, release your DOI here.</p> <p>Or</p> <p><input type="button" value="CREATE A NEW DOI"/></p> </div>	Status	Title	Publication Date	Product Type	Author Last Name	Author First Name	Author Related Resource	Reserved	Lunar Crustal Magnetic Field Map 20201203 Bundle	2021-05-12	PDS4 Bundle	Chen	Gary	urn:nasa:pds:test20210512::1.0
Status	Title	Publication Date	Product Type	Author Last Name	Author First Name	Author Related Resource									
Reserved	Lunar Crustal Magnetic Field Map 20201203 Bundle	2021-05-12	PDS4 Bundle	Chen	Gary	urn:nasa:pds:test20210512::1.0									

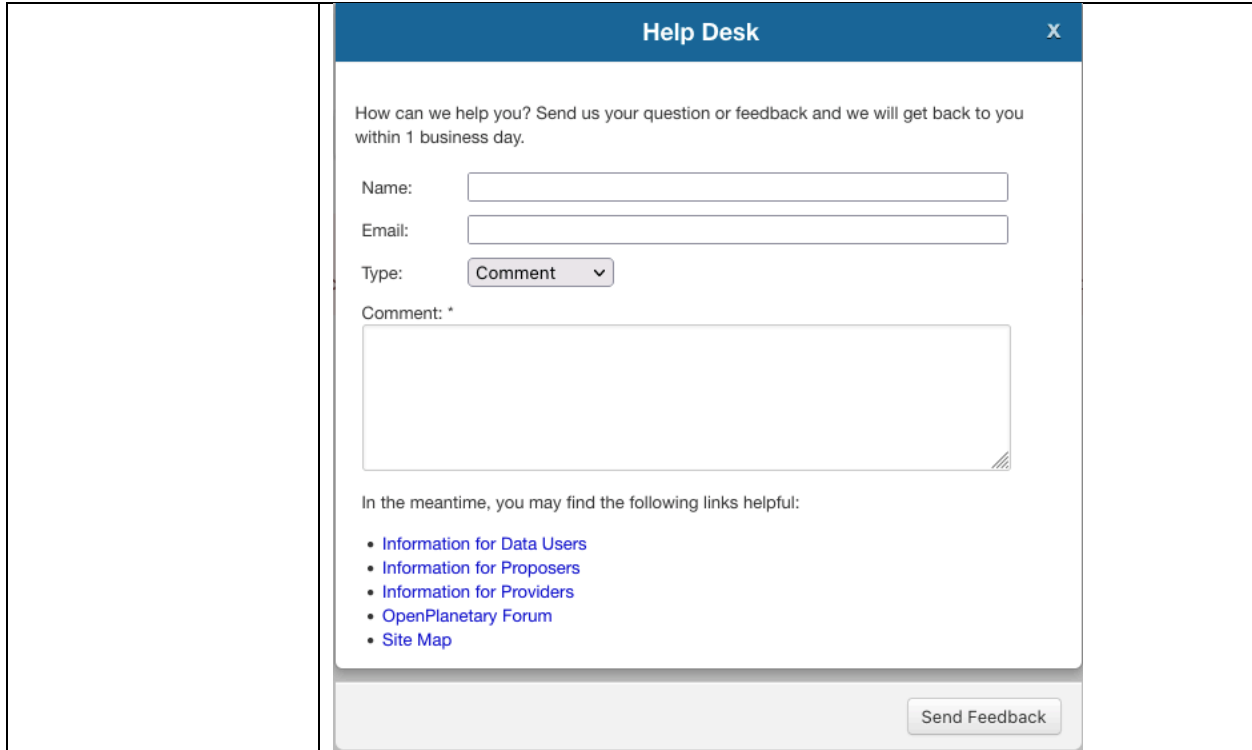
Test ID	DOI-UI.11														
Issue ID	pds-doi-ui#9														
Issue Type	enhancement														
Issue Description	Return API error message in UI.														
Comments	Pass														
Test Plan	<p>send the same reserve request multiple time.</p> <ol style="list-style-type: none"> 1. Go to the Create DOI page 2. Enter email and Node. 3. Browse to DOI2.xlsx 4. Click “reserve” 5. Check reserve statuses 														
Test Result	<table border="1"> <thead> <tr> <th>Status</th> <th>Title</th> <th>Publication Date</th> <th>Product Type</th> <th>Author Last Name</th> <th>Author First Name</th> <th>Author Related Resource</th> </tr> </thead> <tbody> <tr> <td>Reserved</td> <td>Lunar Crustal Magnetic Field Map 20211006 collection</td> <td>2021-10-06</td> <td>PDS4 Collection</td> <td>Chen</td> <td>Gary</td> <td>urn:nasa:pds:test20211006::1.0</td> </tr> </tbody> </table> <div style="background-color: #ffe0b2; padding: 10px; text-align: center;"> <p>CriticalDOIException</p> <p>Description: There is already a DOI 10.13143/9p7y-by45 submitted for record identifier urn:nasa:pds:test20211006::1.0 (status=draft). You cannot update/remove a DOI for an existing record identifier.</p> <p><input type="button" value="RETRY"/></p> </div>	Status	Title	Publication Date	Product Type	Author Last Name	Author First Name	Author Related Resource	Reserved	Lunar Crustal Magnetic Field Map 20211006 collection	2021-10-06	PDS4 Collection	Chen	Gary	urn:nasa:pds:test20211006::1.0
Status	Title	Publication Date	Product Type	Author Last Name	Author First Name	Author Related Resource									
Reserved	Lunar Crustal Magnetic Field Map 20211006 collection	2021-10-06	PDS4 Collection	Chen	Gary	urn:nasa:pds:test20211006::1.0									

Test ID	DOI-UI.12
Issue ID	pds-doi-ui#10
Issue Type	enhancement
Issue Description	Provide a mean to come back to release action when on reserve screen.
Comments	Pass
Test Steps	Navigate the app bar.
Test Results	The App bar allow navigating to different pages.



Test ID	DOI-UI.13
Issue ID	pds-doi-ui#48
Issue Type	enhancement
Issue Description	Enhancements per initial implementation of mockups.
Comments	Pass
Test Steps	Compare the UI with the mockup designs at: https://www.figma.com/proto/D7n5ODxbsHu3DDxE3ykIUV/DOI?page-id=1472%3A312&node-id=1511%3A78&viewport=-2889%2C-74%2C0.21843890845775604&scaling=min-zoom
Test Results	<p>Yes, UI pages were implemented as the mockups.</p>


Test ID	DOI-UI.14
Issue ID	pds-doi-ui#49
Issue Type	enhancement
Issue Description	Add Feedback Widget to DOI UI.
Comments	Pass
Test Steps	Check the UI for feedback widget
Test Results:	<p>Widget on the right hand side of the page.</p>



Test ID	DOI-UI.15
Issue ID	pds-doi-ui#50
Issue Type	enhancement
Issue Description	Add additional help information throughout DOI UI.
Comments	Pass
Test Steps	<p>Check the following in the UI:</p> <p>Add info (something like i) icons on following pages / sections with the following text:</p> <ul style="list-style-type: none"> • Keywords text box – <i>These keywords may be used to enable future discovery of these datasets. The auto-complete values are populated by the Unified Astronomy Thesaurus. Additional custom keywords may also be entered.</i> <ul style="list-style-type: none"> • while updating that, also update to have text completion lineup with the cursor in the text box • On Create DOI page, below “Ignore Warnings” checkbox, add text “Questions about process or information requested? See FAQs or contact the PDS Operator for assistance.” For the FAQ page and email address, let’s make sure we add the applicable icons to indicate they will be leaving the interface, and open in a new window.

Test Results	<div style="border: 1px solid #ccc; padding: 10px; margin-bottom: 10px;"> <input style="width: 100%; height: 20px;" type="text" value="Submitter Email"/> </div> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 10px; display: inline-block;"> Node ▼ </div> <p style="text-align: center;">Has the data been registered and made publicly available?</p> <p style="text-align: center;"> <input type="radio"/> Yes <input type="radio"/> No </p> <div style="position: absolute; top: 10px; right: 10px; background-color: #333; color: white; padding: 5px; font-size: 0.8em;"> Questions about the process or information requested? See FAQs or contact the PDS Operator for assistance. </div>
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Test ID	DOI-UI.16
Issue ID	pds-doi-ui#54
Issue Type	enhancement
Issue Description	Update Release and Update DOI pages to follow similar design as Create DOI page.
Comments	Pass
Test Step	Match the update DOI page and Update Release page to the screen shuts attached to the issue page.
Test Result	DOI update screen design matches with the DOI release screen.

Test ID	DOI-UI.17
Issue ID	pds-doi-ui#75
Issue Type	enhancement
Issue Description	Add link to landing page from <i>Identifier</i> column in search results.
Comments	Pass
Test Plan	Search for a doi with status = registered
Test Result	

Test ID	DOI-UI.18
Issue ID	pds-doi-ui#79
Issue Type	enhancement
Issue Description	Create javascript library for website integration.
Comments	
Test Plan	Skip

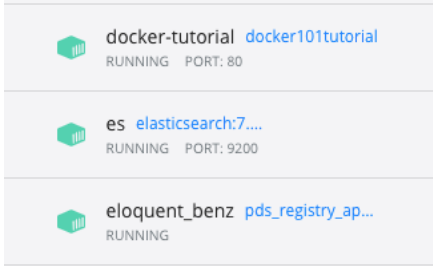
Test ID	DOI-UI.19
Issue ID	pds-doi-ui#82
Issue Type	enhancement
Issue Description	Create PDS React Component Library Process For NPM Packages.

Comments	
Test Plan	Skip

Test ID	REG.1
Issue ID	pds-registry-app#153
Issue Type	requirement
Issue Description	As a developer, I want to extend the registry-mgr and harvest using the Java API
Comments	This is updating Javadocs
Test Plan	SKIP

Test ID	REG.2
Issue ID	pds-registry-app#154
Issue Type	requirement
Issue Description	As a manager, I want the registry to have regression tests included in CI
Comments	? SKIP?
Test Plan	SKIP

Test ID	REG.3
Issue ID	pds-registry-app#163
Issue Type	defect
Issue Description	docker instructions in README.md are not working
Comments	Pass
Test Steps	<pre> 1. gchen@dhcp-137-79-228-248 hvt62 % docker version gchen@dhcp-137-79-228-248 pds % mkdir registry-app gchen@dhcp-137-79-228-248 pds % cd registry-app 2. gchen@dhcp-137-79-228-248 registry-app % git clone https://github.com/NASA-PDS/pds- registry-app.git 3. gchen@dhcp-137-79-228-248 pds-registry-app % docker image build --build-arg version_reg_app=\$(git rev-parse HEAD) --file Dockerfile.local --tag pds_registry_app:\$(git rev-parse HEAD) . gchen@dhcp-137-79-228-248 pds-registry-app % mkdir /tmp/es /tmp/output 4. gchen@dhcp-137-79-228-248 pds-registry-app % docker pull elasticsearch:7.10.1 5. gchen@dhcp-137-79-228-248 pds-registry-app % docker network create pds gchen@dhcp-137-79-228-248 pds-registry-app % docker container run --detach \ --env "discovery.type=single-node" \ --name es \ </pre>

	<pre> --network pds \ --publish 9200:9200 \ --publish 9300:9300 \ --rm \ --user \$UID \ --volume /tmp/es:/usr/share/elasticsearch/data \ elasticsearch:7.10.1 gchen@dhcp-137-79-228-248 pds-registry-app % docker container run --network pds \ --rm \ --user \$UID \ pds_registry_app:\$(git rev-parse HEAD) \ registry-manager create-registry -es http://es:9200 \ - schema /var/local/registry/elastic/registry.json 1. gchen@dhcp-137-79-228-248 pds-registry-app % docker container run --network pds \ 2. --rm \ 3. --user \$UID \ 4. --volume /tmp/output:/var/local/harvest/output \ 5. pds_registry_app:\$(git rev-parse HEAD) harvest \ 6. -c /var/local/harvest/conf/examples/bundles.xml \ 7. -o /var/local/harvest/output </pre>
<p>Test Result</p>	<p>Elasticsearch URL: http://es:9200 Index: registry</p> <p>[INFO] Loading ES data file: /var/local/harvest/output/refs-docs.json [INFO] Loaded 4 document(s) [INFO] Loading ES data file: /var/local/harvest/output/registry-docs.json [INFO] Loaded 17 document(s)</p> <p>gchen@dhcp-137-79-228-248 venv % bin/python3 ckapi.py successfully found elastic search successfully searched for query</p> 

Test ID	REG.4
Issue ID	pds-registry-app#12
Issue Type	requirement
Issue Description	As a registry user, I want to ingest supplemental metadata from Product_Metadata_Supplemental.
Comments	Parent Issue
Test Plan	User the API server to register the test files attached to the issue in github.

Test ID	REG.5
Issue ID	pds-registry-app#172
Issue Type	requirement
Issue Description	Create new app to load supplemental metadata into registry
Comments	Need documentation
Test Plan	SKIP

Test ID	REG.6
Issue ID	pds-registry-app#12
Issue Type	requirement
Issue Description	Change Harvest to store list of supplemental products in a file
Comments	Pass
Test Steps	Crate data folder gchen@Johns-MacBook-Pro testRegistryApp % harvest -c reg-app-12/regapp12.cfg -o .
Test Result	[SUMMARY] Output directory: . [SUMMARY] Output format: json [SUMMARY] Reading configuration from /Users/gchen/pds/pds4test.build12.0/testRegistryApp/reg-app-12/regapp12.cfg [INFO] Processing directory: /Users/gchen/pds/pds4test.build12.0/testRegistryApp/reg-app-12 [INFO] Processing /Users/gchen/pds/pds4test.build12.0/testRegistryApp/reg-app-12/index.xml [SUMMARY] Summary: [SUMMARY] Skipped files: 0 [SUMMARY] Processed files: 1 [SUMMARY] File counts by type: [SUMMARY] Product_Metadata_Supplemental: 1 [SUMMARY] Package ID: a11ad0fe-7b1c-4905-926c-02328cc32801 gchen@Johns-MacBook-Pro reg-app-12 % cd out gchen@Johns-MacBook-Pro out % ll

total 96 8 -rw-r--r-- 1 gchen staff 1735 Oct 24 15:00 fields.txt 0 -rw-r--r-- 1 gchen staff 0 Oct 24 15:00 refs-docs.json 80 -rw-r--r-- 1 gchen staff 38668 Oct 24 15:00 registry-docs.json 8 -rw-r--r-- 1 gchen staff 73 Oct 24 15:00 supplemental.txt

Test ID	REG.7
Issue ID	pds-registry-app#130
Issue Type	requirement
Issue Description	As a node operator, I want to harvest and ingest a subset of a bundle based on existing registered data
Comments	Pass
Test Steps	<p>Step 1. gchen@dhcp-137-79-228-248 testHvt % harvest -c regapp130b/regapp.cfg</p> <p>Step 2. gchen@dhcp-137-79-228-248 testHvt % cp /tmp/harvest/out/registry-docs.json ./outb.json gchen@dhcp-137-79-228-248 testHvt % registry-manager load-data -dir /tmp/harvest/out</p> <p>Step 3. gchen@dhcp-137-79-228-248 testHvt % harvest -c regapp130c/regapp.cfg</p> <p>Step 4. gchen@dhcp-137-79-228-248 testHvt % cp /tmp/harvest/out/registry-docs.json ./outc.json gchen@dhcp-137-79-228-248 testHvt % wc outb.json outc.json</p>
Test Results	<p>Step 1. [SUMMARY] Skipped files: 0 [SUMMARY] Processed files: 4 [SUMMARY] File counts by type: [SUMMARY] Product_Bundle: 1 [SUMMARY] Product_Collection: 1 [SUMMARY] Product_Observational: 2 [SUMMARY] Package ID: 2390d129-c89b-4499-8a81-05799a8bce9b</p> <p>Step 2. Elasticsearch URL: http://localhost:9200 Index: registry</p> <p>[INFO] Updating schema with fields from /tmp/harvest/out/fields.txt [INFO] Updated 6 fields [INFO] Loading ES data file: /tmp/harvest/out/refs-docs.json [INFO] Loaded 1 document(s) [INFO] Loading ES data file: /tmp/harvest/out/registry-docs.json [INFO] Loaded 4 document(s)</p>

```

gchen@dhcp-137-79-228-248 testHvt % curl
"http://localhost:9200/registry/_search?q=*&pretty" >
curl.b
  % Total    % Received % Xferd  Average Speed   Time
Time       Time    Current                      Dload  Upload
Total      Spent    Left  Speed
100 80469 100 80469    0    0  92493      0  --:--:--
-- --:--:-- --:--:-- 92386
Step 3.
[INFO] Processing products...
[INFO] Processing product
/Users/gchen/pds/pds4test.build12.0/reg-app-
130/test/testHvt/regapp130c/data_derived/xtra.xml
[INFO] Skipping product
/Users/gchen/pds/pds4test.build12.0/reg-app-
130/test/testHvt/regapp130c/data_derived/Saturn_015.xml
[INFO] Skipping product
/Users/gchen/pds/pds4test.build12.0/reg-app-
130/test/testHvt/regapp130c/data_derived/Saturn_015_pg.xml
[SUMMARY] Summary:
[SUMMARY] Skipped files: 3
[SUMMARY] Processed files: 2
[SUMMARY] File counts by type:
[SUMMARY]   Product_Collection: 1
[SUMMARY]   Product_Observational: 1
[SUMMARY] Package ID: 0b3e2a1e-a4b9-4ba9-a51e-441fcfae6e48

Step 4.
  8  510 30894 outb.json
  4   91 12877 outc.json
 12  601 43771 total
    
```

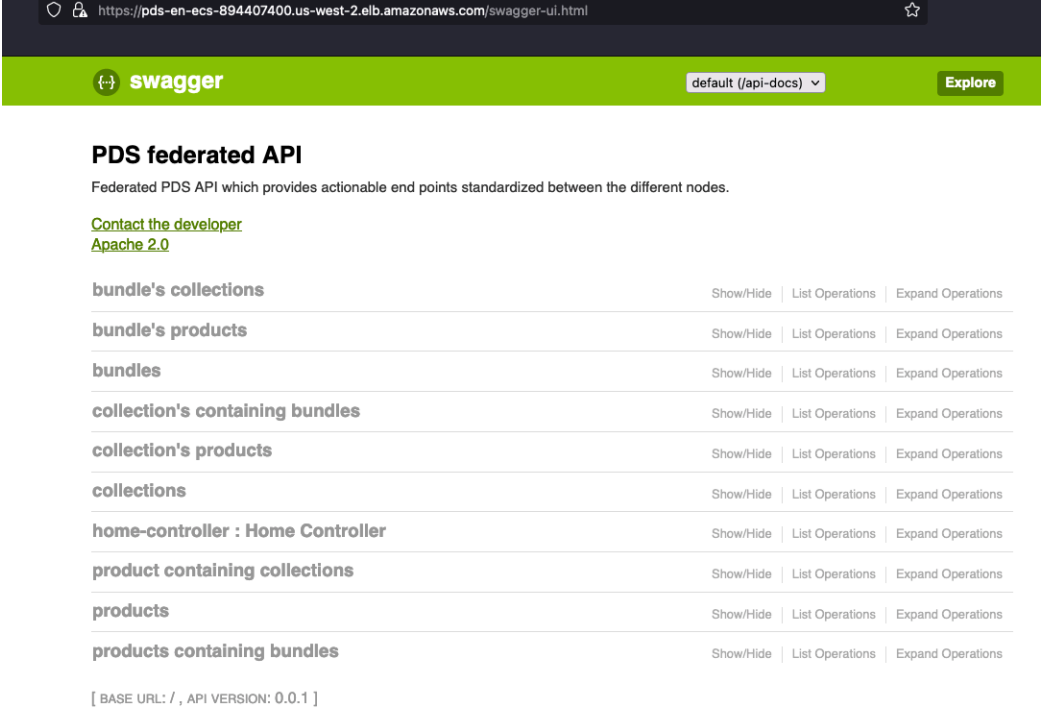
Test ID	REG.8
Issue ID	pds-registry-app#147
Issue Type	requirement
Issue Description	As a node operator, I want to be able to tag ingested data with the node it is ingested by.
Comments	Pass
Test Steps	Tested with HAR.2 Then I expect I can retrieve which node has loaded it.

TestResult	<pre> ops:Data_File_Info/ops:creation_date_time: "2020-11-17T00:27:06Z" ops:Data_File_Info/ops:file_name: "collection_data-1.0.csv" ops:Data_File_Info/ops:file_ref: "/Users/gchen/pds/pds4test.build12.0/1 ops:Data_File_Info/ops:file_size: "79" ops:Data_File_Info/ops:md5_checksum: "78329ba8a907c42a98cb700ff8dd5d9b" ops:Data_File_Info/ops:mime_type: "text/plain" ops:Harvest_Info/ops:harvest_date_time: "2021-10-24T17:45:24.004751Z" ops:Harvest_Info/ops:node_name: "PDS_ENG" ops:Label_File_Info/ops:blob: "eJzVWV9z4jgSf59PoWMfbqYqtoFMNgnreIoLj /Ooufcjvz3AXwFvVG3a4tw3kFvEHZgF0mwXGU /MxYdoYkNfz+he8Y5EUfo0kb/gMdfY7og10Mj5 //hwf5Cr+zEZi0ZMAtepyn4ePeQNrhdhPLP4GT /cD9RNMf8Fd0TksQz8PFGPjV0EZ0wQzw0pFI /N3WmwvWX877vz4Iwhcq5fgrIUny4kCrM4JMm /Om/dq6awDKp3ybbkdcN2VIx4XTUFoCedpYbDf /MqBrkxi/FAff06j+e/DmrsSYV+VSv3msZEJ /miQ6ip6So6IMGU0SB0ihvsQyF7tq69KW01zR ops:Label_File_Info/ops:creation_date_time: "2020-11-22T08:18:40Z" </pre>
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Test ID	REG.9
Issue ID	pds-registry-app#185
Issue Type	requirement
Issue Description	As a user, I want to know the version of all registry app components via the command-line
Comments	Pass
Test Steps	Step 1: harvest -V Step 2: registry-manager -V
Test Result	Step 1. gchen@Johns-MacBook-Pro pds-registry-app-1.0.0 % harvest -V Harvest version: 3.5.0 Build time: 2021-09-30T04:19:26Z Step 2. Registry Manager version: 4.2.0 Build time: 2021-09-30T05:02:15Z

Test ID	REG.10
Issue ID	pds-registry-app#122
Issue Type	enhancement
Issue Description	Initial deployment of API on AWS - ASG/ELB solution
Comments	NEED URL of deployed components.
Test Plan	SKIP

Test ID	REG.11
Issue ID	pds-registry-app#150
Issue Type	enhancement
Issue Description	Develop plan for instituting AWS ES Cross Cluster Search
Comments	
Test Plan	SKIP

Test ID	REG.12
Issue ID	pds-registry-app#165
Issue Type	enhancement
Issue Description	Initial deployment of API on AWS - Fargate solution
Comments	Pass
Test Steps	http://pds-en-ecs-894407400.us-west-2.elb.amazonaws.com/swagger-ui.html
Test Result	

Test ID	REG-MGR.1
Issue ID	pds-registry-mgr-elastic#33
Issue Type	defect
Issue Description	registry-mgr cannot handle updated JSON files output from LDDTool.
Comments	Pass
Test Steps	<p>Run registry-mgr load schema with test data from https://github.com/NASA-PDS/pds4-information-model/issues/397</p> <p>Step 1. gchen@dhcp-137-79-237-21 PDS4tools_current % cd elasticsearch-7.15.0 gchen@dhcp-137-79-237-21 elasticsearch-7.15.0 % ./bin/elasticsearch</p> <p>Step 2. [INFO] Creating temporary ES data file /var/folders/p3/n2qz3v1563j4hywkfq61wwbw0000gq/T/pds-registry-dd.tmp.json</p>
Test Results	Step 2.

	<p>Elasticsearch URL: http://localhost:9200 Index: registry Data dictionary: PDS4_SPECLIB_1G00_1100.JSON Namespace: speclib</p> <p>[INFO] Creating temporary ES data file /var/folders/p3/n2qz3v1563j4hywkfq61wwbw0000gq/T/pds-registry-dd.tmp.json [INFO] Loading ES data file: /var/folders/p3/n2qz3v1563j4hywkfq61wwbw0000gq/T/pds-registry-dd.tmp.json [INFO] Loaded 56 document(s)</p>
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Test ID	WEB.1
Issue ID	PDS.nasa.gov-UX#80
Issue Type	Enhancement
Issue Description	Create new Training page
Comments	Tested with PDS.nasa.gov-UX#86, PDS.nasa.gov-UX#88
Test Plan	Visit new training page

Test ID	WEB.2
Issue ID	PDS.nasa.gov-UX#81
Issue Type	Enhancement
Issue Description	incorporate new materials - misc videos and ancillary files for TBD video.
Comments	PASS
Test Plan	<ul style="list-style-type: none"> • File Area: https://youtu.be/TF1ubd8_fiA • Display Settings: https://youtu.be/WZDr1QL3OnU • Array 2D: https://youtu.be/DhIKfBvgzsA
Test Results	All Items have been implemented.

Test ID	WEB.3
Issue ID	PDS.nasa.gov-UX#86
Issue Type	defect
Issue Description	[Training] incorporate changes from June pow-wow.
Comments	Pass
Test Plan	VERIFY the following in https://pds.nasa.gov/datastandards/ : remove FAQs remove sub-levels from Table of Contents Author Attribution: move from sidebar into section at bottom of page; retile 'Contributors' and add sentence(s) retile page to PDS4 Training, remove second sentence, and remove redundant mentions of 'PDS4'

	<p>remove link for ‘PDS4 Documentation’ move all items from ‘Where Can I Find’ to ‘PDS4 Conventions’ move ‘PDS4 Software’ to ‘PDS4 Tools’ just before ‘LDDTool’ and reword to ‘Key Tools’ add sentence to end of ‘PDS4 Tools’ for Tool Registry move any high-level, clickable item that is a link to the top of its own list make caret the same blue as document links make sure all videos are left in the documentation</p>
Test Results	All items have been implemented.

Test ID	WEB.4
Issue ID	PDS.nasa.gov-UX#88
Issue Type	Enhancement
Issue Description	[Training] incorporate changes from first iteration of feedback
Comments	PASS
Test Plan	<p>Verify the following are added: add introduction add checklist to beginning of page revise Proposers’ Guidelines’ Detailed Archiving Checklist GEO’s notes RMS’ (?) notes misc notes updated documents and videos</p>
Test Result	All items have been implemented.

Test ID	JP.1
Issue ID	pds4-jparser#40
Issue Type	defect
Issue Description	SNAPSHOT dependencies in 2.0.0 release
Comments	NEED help with instructions.
Test Plan	SKIP this test

Test ID	REG-API.1
Issue ID	registry-api-service#16
Issue Type	defect
Issue Description	API server crashes with OutOfMemoryError if invalid query is used
Comments	Pass
Test Plan	<ul style="list-style-type: none"> • Go to Swagger UI (http://localhost:8080) • Click on ‘collections’ link. • Enter invalid query title=Kaguya in ‘q’ parameter • Hit ‘Try it out!’ button.

Test Steps	<ol style="list-style-type: none"> Step 1 cd <whereverInstalled>; java -jar registry-api-service-0.1.0.jar Go to Swagger UI (http://localhost:8080) Click on ‘collections’ link. Enter invalid query title=Kaguya in ‘q’ parameter Hit ‘Try it out!’ button.
Test Result	<div style="border: 1px solid #ccc; padding: 10px; background-color: #f9f9f9;"> <div style="display: flex; justify-content: space-between; align-items: center;"> Try it out! Hide Response </div> <p>Curl</p> <pre>curl -X GET --header 'Accept: application/json' 'http://localhost:8080/collections?start=Kaguya&limit=100&only-summary=</pre> <p>Request URL</p> <pre>http://localhost:8080/collections?start=Kaguya&limit=100&only-summary=false</pre> <p>Request Headers</p> <pre>{ "Accept": "application/json" }</pre> <p>Response Body</p> <pre>no content</pre> <p>Response Code</p> <pre>400</pre> <p>Response Headers</p> <pre>{ "connection": "close", "content-length": "0", "date": "Sat, 09 Oct 2021 17:39:21 GMT", "content-type": null }</pre> </div>

Test ID	REG-API.2
Issue ID	registry-api-service#17
Issue Type	defect
Issue Description	error 500 on GET /collections/:lidvid:/products
Comments	PASS
Test Plan	<p>Run request:</p> <pre>curl -location -request GET 'https://pds-gamma.jpl.nasa.gov/api/collections/urn:nasa:pds:insight_documents:document_mission::1.1/products?start=0&limit=10&fields=ops:Data_File_Info.ops:md5_checksum&only-summary=false'</pre>
Test Steps	<ol style="list-style-type: none"> Go to Swagger UI (https://pds-gamma.jpl.nasa.gov/api/swagger-ui.html) Click on ‘collections’ link. Enter query identifier = urn:nasa:pds:insight_documents:document_mission::1.1 in ‘q’ parameter Hit ‘Try it out!’ button.

Test Result	<p>500 Internal server error</p> <p>Try it out! Hide Response</p>
	<p>Curl</p> <pre>curl -X GET --header 'Accept: application/json' 'https://pds-gamma.jpl.nasa.gov/api/collections/urn%3Anasa%3Aapds%3Ainsi'</pre>
	<p>Request URL</p> <pre>https://pds-gamma.jpl.nasa.gov/api/collections/urn%3Anasa%3Aapds%3Ainsight_documents%3Adocument_mission%3A%3A1.1</pre>
	<p>Request Headers</p> <pre>{ "Accept": "application/json" }</pre>
	<p>Response Body</p> <pre>{ "id": "urn:nasa:pds:insight_documents:document_mission::1.1", "type": "Product_Collection", "title": "InSight Mission Document Collection", "investigations": [{ "id": "urn:nasa:pds:context:investigation:mission.insight", "href": "http://pds-gamma.jpl.nasa.gov/api/products/urn:nasa:pds:context:investigation:mission.insight" }], "observing_system_components": [{ "id": "urn:nasa:pds:context:instrument_host:spacecraft.insight", "href": "http://pds-gamma.jpl.nasa.gov/api/products/urn:nasa:pds:context:instrument_host:spacecraft.insight" }, { "id": "urn:nasa:pds:context:instrument:apss-ifg.insight", "href": "http://pds-gamma.jpl.nasa.gov/api/products/urn:nasa:pds:context:instrument:apss-ifg.insight" }] }</pre>
	<p>Response Code</p> <pre>200</pre>

Test ID	REG-API.3
Issue ID	registry-api-service#27
Issue Type	defect
Issue Description	XML and PDS4+XML Response Formats are invalid
Comments	Pass
Test Plan	application/xml and application/pds4+xml disabled.
Test Steps	<ol style="list-style-type: none"> 1. Go to Swagger UI (https://pds-gamma.jpl.nasa.gov/api/swagger-ui.html) 2. Click on 'collections' link. 3. Click on 'Respose Content Type' drop down box 4. Choose 'application/pds4+xml' 5. Enter query identifier = urn:nasa:pds:insight_documents:document_mission::1.1 6. in 'q' parameter <p>Hit 'Try it out!' button.</p>
Test Result	<p>Step 4:</p> <pre>application/json application/pds4+xml</pre>

application/pds4+json

Step 7:

Response Class (Status 200)
Successful request

Model | Example Value

```
<?xml version="1.0"?>
<!-- invalid XML -->
```

Response Content Type

Parameters

Parameter	Value	Description	Parameter Type	Data Type
identifier	<input type="text" value="urn:nasa:pdsLinsight_documents::2.0"/>	lidvid or lid	path	string
start	<input type="text"/>	offset in matching result list, for pagination	query	integer
limit	<input type="text" value="10"/>	maximum number of matching results returned, for pagination	query	integer

Response Messages

HTTP Status Code	Reason	Response Model	Headers
401	Unauthorized		
403	Forbidden		
404	lidvid not found		
500	Internal server error		

[Try it out!](#) [Hide Response](#)

Curl

```
curl -X GET --header 'Accept: application/json' 'https://pds-gamma.jpl.nasa.gov/api/bundles/urn%3Anasa%3ApdsLinsight_dc'
```

Request URL

```
https://pds-gamma.jpl.nasa.gov/api/bundles/urn%3Anasa%3ApdsLinsight_documents%3A%3A2.0/all?limit=10
```

Request Headers

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

Response Body

```
no content
```

Response Code

Test ID	REG-API.4
Issue ID	registry-api-service#36
Issue Type	defect

Issue Description	The end point /bundles/{lidvid}/products does not fully work
Comments	PASS
Test Steps	<ol style="list-style-type: none"> 1. Launch Postman 2. Create a get url for pds.gamma.jpl.gov using collections/urn:nasa:pds:orex.ovirs:data_calibrated/products. 3. Set the limit to 1000 4. Enter https://pds-gamma.jpl.nasa.gov/api/collections/urn%3Anasa%3Aapds%3Aorex.ovirs%3Adata_calibrated/products?limit=1000&only-summary=false in the url 5. Check response. 6. Using another third party json program 7. Enter same url. 8. Check response in prettified json view.
Test Results :	<p>Step 5:</p> <pre> 1 2 "summary": { 3 "hits": 279500, 4 "took": 7424, 5 "start": 0, 6 "limit": 1000, 7 "sort": [], 8 > "properties": [--- 129] 130 }, 131 > "data": [--- 544388] 544389 </pre> <p style="text-align: right;">the data section have 544388 lines.</p> <p>Step 6:</p>

Resource

Address: <https://pds-gamma.jpl.nasa.gov/api/collections/urn%3Anasa%3Aaps%3Aorex.c>

Method: Get Post Put Delete

Query Data: Use query format. Or click right to use GUI editor.

Content:

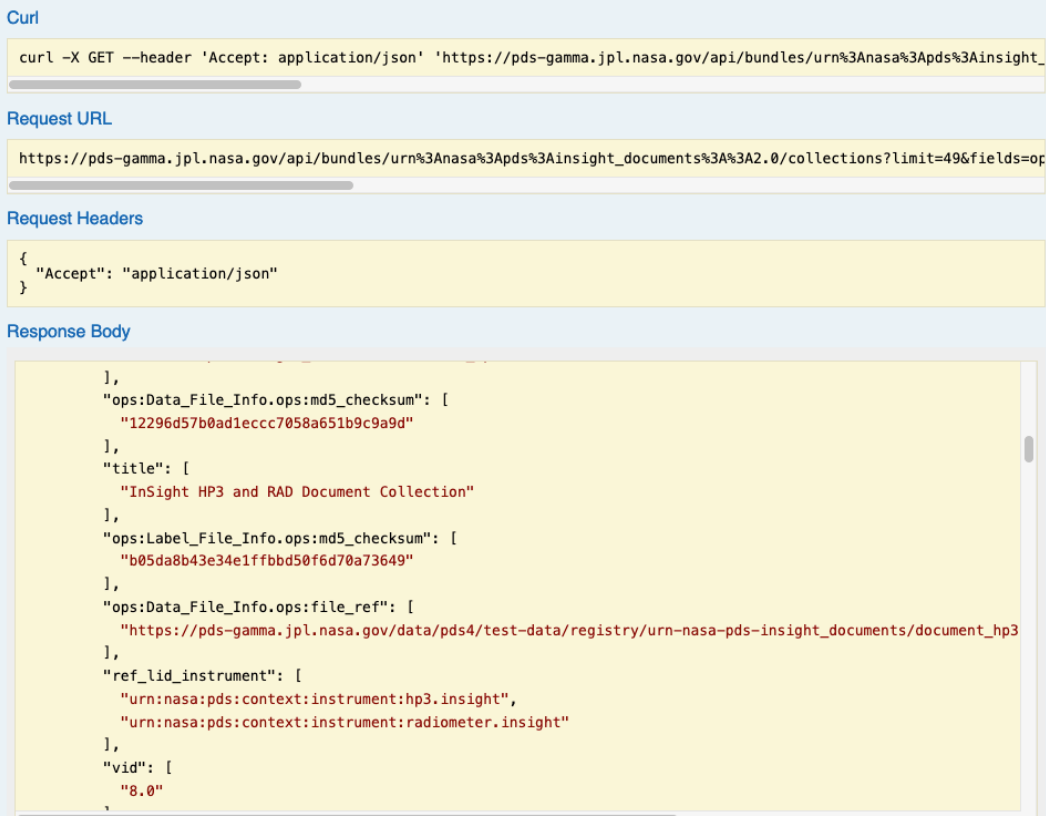
```
{
  "summary": {
    "hits": 279500,
    "took": 3630,
    "start": 0,
    "limit": 1000,
    "sort": [],
    "properties": [
      "sp:Observation_Parameters/sp:net_integration_time",
      "pds:Observing_System_Component/pds:description",
      "vid",
      "orex:Time/orex:mid_obs",
      "orex:Spatial/orex:semiminor_axis",
      "sp:Bin_Description/sp:bin_profile_description",
      "geom:Geometry_Orbiter/geom:geometry_reference_time_tdb",
      "sp:Observation_Parameters/sp:number_of_exposures",
      "pds:Identification_Area/pds:information_model_version",
      "pds:Internal_Reference/pds:reference_type",
      "ops:Data_File_Info/ops:mime_type",
      "orex:Spatial/orex:semimajor_axis",
      "pds:Array_2D/pds:axes",
      "pds:Axis_Array/nrc:satellite_number",
      "orex:Time/orex:mid_obs",
      "vid:Internal_Reference"
    ]
  }
}
```

Tree Text

node	description
node	Dict(2)
data	Array(1000)
> 0	Dict(10)
> 1	Dict(10)
> 2	Dict(10)
> 3	Dict(10)
> 4	Dict(10)
> 5	Dict(10)
> 6	Dict(10)
> 7	Dict(10)
> 8	Dict(10)
> 9	Dict(10)
> 10	Dict(10)
> 11	Dict(10)
> 12	Dict(10)
> 13	Dict(10)
> 14	Dict(10)
> 15	Dict(10)
> 16	Dict(10)
> 17	Dict(10)
> 18	Dict(10)

This program shows there are 1000 products returned.

Test ID	REG-API.5
Issue ID	registry-api-service#43
Issue Type	defect
Issue Description	As an API caller, I expect MD5s and file reference URLs to have real values and not the string “null”
Comments	PASS
Test Plan	curl \ --silent \ --request GET \ --header 'Accept: application/json' \

	<p>'https://pds-gamma.jpl.nasa.gov/api/bundles/urn%3Anasa%3A%3A2.0/collections?start=0&limit=49&fields=ops%3AData_File_Info.ops%3Afile_ref&fields=ops%3AData_File_Info.ops%3Amd5_checksum&fields=ops%3ALabel_File_Info.ops%3Afile_ref&fields=ops%3ALabel_File_Info.ops%3Amd5_checksum&only-summary=false' \ json_pp and look at all the nulls and values</p>
<p>Test Steps</p>	<p>9. Go to Swagger UI (https://pds-gamma.jpl.nasa.gov/api/swagger-ui.html) 10. Click on '/bundles/{identifier}/collections' link. 11. Enter 'urn:nasa:pds:insight_documents::2.0' for identifier 12. Enter in fields: <ol style="list-style-type: none"> ops:Data_File_Info.ops:file_ref ops:Data_File_Info.ops:md5_checksum ops:Label_File_Info.ops:file_ref ops:Label_File_Info.ops:md5_checksum Hit 'Try it out!' button.</p>
<p>Test Result</p>	 <pre> Curl curl -X GET --header 'Accept: application/json' 'https://pds-gamma.jpl.nasa.gov/api/bundles/urn%3Anasa%3A%3A2.0/collections?limit=49&fields=ops:Data_File_Info.ops:file_ref&fields=ops:Data_File_Info.ops:md5_checksum&fields=ops:Label_File_Info.ops:file_ref&fields=ops:Label_File_Info.ops:md5_checksum&only-summary=false' Request URL https://pds-gamma.jpl.nasa.gov/api/bundles/urn%3Anasa%3A%3A2.0/collections?limit=49&fields=ops:Data_File_Info.ops:file_ref&fields=ops:Data_File_Info.ops:md5_checksum&fields=ops:Label_File_Info.ops:file_ref&fields=ops:Label_File_Info.ops:md5_checksum&only-summary=false Request Headers { "Accept": "application/json" } Response Body { "ops:Data_File_Info.ops:md5_checksum": ["12296d57b0ad1eccc7058a651b9c9a9d"], "title": ["InSight HP3 and RAD Document Collection"], "ops:Label_File_Info.ops:md5_checksum": ["b05da8b43e34e1ffb5d50f6d70a73649"], "ops:Data_File_Info.ops:file_ref": ["https://pds-gamma.jpl.nasa.gov/data/pds4/test-data/registry/urn-nasa-pds-insight_documents/document_hp3"], "ref_lid_instrument": ["urn:nasa:pds:context:instrument:hp3.insight", "urn:nasa:pds:context:instrument:radiometer.insight"], "vid": ["8.0"] } </pre>

<p>Test ID</p>	<p>REG-API.6</p>
<p>Issue ID</p>	<p>registry-api-service#51</p>
<p>Issue Type</p>	<p>defect</p>
<p>Issue Description</p>	<p>blob is returned in product results if fields to return are not specified</p>

	<pre> 2021-10-09 14:07:46.235 INFO 81176 --- [main] g.n.pds.api.engineering.SpringBootMain : Starting SpringBootMain v0.3.2 on ps-128-149-81-249.jpl.nasa.gov with PID 81176 (/Users/gchen/pds/PDS4tools_current/registry-api-service-0.3.2.jar started by gchen in /Users/gchen/pds/PDS4tools_current) 2021-10-09 14:07:46.237 INFO 81176 --- [main] g.n.pds.api.engineering.SpringBootMain : No active profile set, falling back to default profiles: default 2021-10-09 14:07:47.888 INFO 81176 --- [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat initialized with port(s): 8080 (http) 2021-10-09 14:07:47.900 INFO 81176 --- [main] o.apache.catalina.core.StandardService : Starting service [Tomcat] 2021-10-09 14:07:47.900 INFO 81176 --- [main] org.apache.catalina.core.StandardEngine : Starting Servlet engine: [Apache Tomcat/9.0.36] 2021-10-09 14:07:47.995 INFO 81176 --- [main] o.a.c.c.C.[Tomcat].[localhost].[/] : Initializing Spring embedded WebApplicationContext 2021-10-09 14:07:47.995 INFO 81176 --- [main] w.s.c.ServletWebServerApplicationContext : Root WebApplicationContext: initialization completed in 1682 ms 2021-10-09 14:07:48.168 INFO 81176 --- [main] .e.e.ElasticSearchRegistryConnectionImpl : Connection to elastic search 2021-10-09 14:07:48.168 INFO 81176 --- [main] .e.e.ElasticSearchRegistryConnectionImpl : Host localhost:9200 2021-10-09 14:07:48.171 INFO 81176 --- [main] .e.e.ElasticSearchRegistryConnectionImpl : Set elasticSearch connection with username/password 2021-10-09 14:07:48.800 WARN 81176 --- [main] ConfigServletWebServerApplicationContext : Exception encountered during context initialization - cancelling refresh attempt: org.springframework.beans.factory.UnsatisfiedDependencyException: Error creating bean with name 'myProductsApiController': Unsatisfied dependency expressed through field 'esRegistryConnection'; nested exception is org.springframework.beans.factory.BeanCreationException: Error creating bean with name 'esRegistryConnection' defined in class path resource [gov.nasa.pds.api.engineering.elasticsearch/ElasticSearchConfig.class]: Bean instantiation via factory method failed; nested exception is org.springframework.beans.BeanInstantiationException: Failed to instantiate [gov.nasa.pds.api.engineering.elasticsearch.ElasticSearchRegistryConnection]: Factory method 'ElasticSearchRegistryConnection' threw exception; nested exception is java.lang.RuntimeException: java.net.ConnectException: Connection refused 2021-10-09 14:07:48.804 INFO 81176 --- [main] o.apache.catalina.core.StandardService : Stopping service [Tomcat] 2021-10-09 14:07:48.824 INFO 81176 --- [main] ConditionEvaluationReportLoggingListener : Error starting ApplicationContext. To display the conditions report re-run your application with 'debug' enabled. 2021-10-09 14:07:48.833 ERROR 81176 --- [main] o.s.boot.SpringApplication : Application run failed </pre>
--	--

	<p>Step 4:</p> <p>Receive Unable to connect message</p>
--	---

Test ID	REG-API.8
Issue ID	registry-api-service#62
Issue Type	defect
Issue Description	API unable to handle products with multiple file areas
Comments	Pass
Test Steps	<p>Step 1. Copy data files from hvt55 to hvt62</p> <p>Step 2. Modified xml file with additional file field.</p> <p>Step 3. Harvest the file: harvest -c hvt62.cfg</p> <p>Step 4. Search it in /products/productsByLidvid</p>
Test Results	<p>Step 3. gchen@Johns-MacBook-Pro hvt62 % harvest -c hvt62.cfg</p> <p>[SUMMARY] Output directory: /tmp/harvest/out</p> <p>[SUMMARY] Output format: json</p> <p>[SUMMARY] Reading configuration from</p> <p>/Users/gchen/pds/pds4test.build12.0/testHvt/hvt62/hvt62.cfg</p> <p>[INFO] Processing directory:</p> <p>/Users/gchen/pds/pds4test.build12.0/testHvt/hvt62</p> <p>[INFO] Processing</p> <p>/Users/gchen/pds/pds4test.build12.0/testHvt/hvt62/collection_data-1.0.xml</p> <p>[SUMMARY] Summary:</p> <p>[SUMMARY] Skipped files: 0</p> <p>[SUMMARY] Processed files: 1</p> <p>[SUMMARY] File counts by type:</p> <p>[SUMMARY] Product_Collection: 1</p> <p>[SUMMARY] Package ID: 579efca5-60b3-4f71-8564-17ea3d818459</p> <p>Step 4:</p>

lidvid `asa:pds:lunar-crust-magnetic.field-map:data` lidvid (urn) path string

Response Messages

HTTP Status Code	Reason	Response Model	Headers
401	Unauthorized		
403	Forbidden		
404	lidvid not found		
500	Internal server error		

Try it out! [Hide Response](#)

Curl

```
curl -X GET --header 'Accept: application/xml' 'http://localhost:8080/products/urn%3Anasa%3Aads%3Alunar-crust-magnetic.
```

Request URL

```
http://localhost:8080/products/urn%3Anasa%3Aads%3Alunar-crust-magnetic.field-map%3Adata
```

Request Headers

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

Response Body

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<product xmlns:ns2="http://pds.nasa.gov/api">
  <id>urn:nasa:pds:lunar-crust-magnetic.field-map:data::1.1</id>
  <type>Product_Collection</type>
  <title>Lunar Crustal Magnetic Field Map Data Collection</title>
  <startDateTime>1965-01-01T00:00:00.000Z</startDateTime>
  <stopDateTime>1900-01-01T00:00:00Z</stopDateTime>
  <investigations>
    <id>urn:nasa:pds:context:investigation:mission.kaguya</id>
    <href>http://localhost:8080/products/urn:nasa:pds:context:investigation:mission.kaguya</href>
  </investigations>
  <investigations>
    <id>urn:nasa:pds:context:investigation:mission.lunar_prospector</id>
    <href>http://localhost:8080/products/urn:nasa:pds:context:investigation:mission.lunar_prospector</href>
  </investigations>
  <observingSystemComponents>
    <id>urn:nasa:pds:context:instrument_host:spacecraft.kaguya</id>
    <href>http://localhost:8080/products/urn:nasa:pds:context:instrument_host:spacecraft.kaguya</href>
  </observingSystemComponents>
</product>
```

Test ID	REG-API.9
Issue ID	registry-api-service#69
Issue Type	requirement
Issue Description	As a paginator, I want endpoints to consistently return no results when I page to the end of results
Comments	Pass
Test Plan	
Test Steps	<ol style="list-style-type: none"> 1. Go to Swagger UI (https://pds-gamma.jpl.nasa.gov/api/swagger-ui.html) 2. go to GET /bundles/{identifier}/Collections 3. set start to 0 and limit to 20 4. set fields to 'fields=product_class&only-summary=false' json_pp' 5. click "Try it out!" 6. Try again, this time with start = 5

Test Result	<p>Response Body</p> <pre> { "summary": { "hits": 5, "took": 54, "start": 5, "limit": 20, "sort": [], "properties": [] } } </pre>
-------------	---

Test ID	REG-API.10
Issue ID	registry-api-service#10
Issue Type	requirement
Issue Description	As a SA, I want to deploy the API behind a proxy
Comments	Test deployment? What is the expected result?
Test Plan	Check document at: https://medium.com/@codebyamir/using-apache-as-a-reverse-proxy-for-spring-boot-embedded-tomcat-f704da73e7c8

Test ID	REG-API.11
Issue ID	registry-api-service#13
Issue Type	requirement
Issue Description	As a developer, I want to utilize Elasticsearch performance robustness for API response time requirements.
Comments	Pass
Test Steps	<ol style="list-style-type: none"> Step 1 cd <whereverInstalled>; java -jar registry-api-service-0.1.0.jar Go to Swagger UI (http://localhost:8080) Click on 'collections' link. Hit 'Try it out!' button. View elasticsearch log
Test Results	<pre> 2021-10-09 13:41:03.362 WARN 80158 --- [nio-8080-exec-1] org.elasticsearch.client.RestClient : request [POST http://localhost:9200/registry/_search?typed_keys=true&max_concurrent_shard_reques sts=5&ignore_unavailable=false&expand_wildcards=open&allow_no_indices=true& ignore_throttled=true&search_type=query_then_fetch&batched_reduce_size=512& ccs_minimize_roundtrips=true] returned 1 warnings: [299 Elasticsearch-7.15.0- 79d65f6e357953a5b3cbcc5e2c7c21073d89aa29 "Elasticsearch built-in security features are not enabled. Without authentication, your cluster could be accessible to anyone. See https://www.elastic.co/guide/en/elasticsearch/reference/7.15/security-minimal- setup.html to enable security."] 2021-10-09 13:41:03.363 INFO 80158 --- [nio-8080-exec-1] g.n.p.a.e.s.XmlProductSerializer : gov.nasa.pds.model.Products </pre>

Test ID	REG-API.12
Issue ID	registry-api-service#14
Issue Type	requirement
Issue Description	As a node operators, I want to deploy the Registry API Service with the PDS Registry.

Comments	Pass
Test Steps	check registry documentation https://nasa-pds.github.io/pds-registry-app/install/test.html
Test Results	New Section for “Test Your Deployment” with Registry-API

Test ID	REG-API.13
Issue ID	registry-api-service#33
Issue Type	requirement
Issue Description	As a user, I want to get a 404 error when I attempt to request a resource which does not exists
Comments	Pass
Test Steps	<ol style="list-style-type: none"> 1. Go to Swagger UI (https://pds-gamma.jpl.nasa.gov/api/swagger-ui.html) 2. go to GET /bundles/{identifier}/Collections 3. Enter ‘foobar’ in lidvid 4. Hit ‘Try it out!’ button.
Test Result	<p>Request URL</p> <pre>https://pds-gamma.jpl.nasa.gov/api/bundles/foobar/collections?limit=100&only-summary=false</pre> <p>Request Headers</p> <pre>{ "Accept": "application/json" }</pre> <p>Response Body</p> <pre>no content</pre> <p>Response Code</p> <pre>404</pre>

Test ID	REG-API.14
Issue ID	registry-api-service#47
Issue Type	requirement
Issue Description	As a user, I want to have a complete default fields (for now at least)
Comments	Pass
Test Steps	<ol style="list-style-type: none"> 1. Go to Swagger UI (https://pds-gamma.jpl.nasa.gov/api/swagger-ui.html) 2. go to /products 3. Enter ‘title,ops:Label_File_Info.ops:md5_checksum’ in fields 4. Hit ‘Try it out!’ button.

Test Result	<p style="color: #0070c0; margin: 0;">Response Body</p> <pre style="background-color: #fff9c4; padding: 10px; border: 1px solid #ccc;"> "properties": ["ops:Label_File_Info.ops:md5_checksum", "title"] }, "data": [{ "id": "urn:nasa:pds:insight_documents:2.0", "type": "Product_Bundle", "title": "Mars InSight Lander Document Archive", "investigations": [{ "id": "urn:nasa:pds:context:investigation:mission.insight", "href": "http://pds-gamma.jpl.nasa.gov/api/products/urn:nasa:pds:context:investigation:mission.insight" }], "observing_system_components": [{ "id": "urn:nasa:pds:context:instrument_host:spacecraft.insight", "href": "http://pds-gamma.jpl.nasa.gov/api/products/urn:nasa:pds:context:instrument_host:spacecraft.insight" }] }] </pre>
-------------	--

Test ID	VAL.1
Issue ID	validate#69
Issue Type	requirement
Issue Description	As a user, I want to validate that all context objects specified in observational products are referenced in the parent bundle/collection Reference List
Comments	Fail
Test Steps	<p>Get test file from https://github.com/NASA-PDS/validate/tree/main/src/test/resources/github69</p> <p>Run validate against test file lid_references in val69/:</p> <p>bundle: saturn narvi collection: saturn titan data: saturn narvi</p> <ol style="list-style-type: none"> 1. validate -R pds4.bundle -t val69 2. validate -R pds4.bundle --skip-context-reference-check -t val69
Test Results:	<p>Step 1: bundle should get flagged for collection's titan; collection should get flagged for data's narvi. But no</p> <p>PDS Validate Tool Report Configuration: Version 2.2.0-SNAPSHOT Date 2021-10-25T23:53:28Z Parameters: Targets [file:/Users/rchen/Desktop/test/val69/] 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 /Users/rchen/PDS4tools/validate/resources/registered_context_products.json Product Level Validation Results PASS: file:/Users/rchen/Desktop/test/val69/bundle-vg1-sat-pos-11 coords-1.0.xml 1 product validation(s) completed</p>

	<p>PASS: file:/Users/rchen/Desktop/test/val69/data-sedr/SEDR_L1.xml 2 product validation(s) completed PASS: file:/Users/rchen/Desktop/test/val69/data-sedr/collection-data-sedr-1.0.xml 3 product validation(s) completed PDS4 Bundle Level Validation Results PASS: file:/Users/rchen/Desktop/test/val69/data-sedr/collection-data-sedr-1.0.xml 1 integrity check(s) completed PASS: file:/Users/rchen/Desktop/test/val69/bundle-vg1-sat-pos-11 coords-1.0.xml WARNING [warning.integrity.missing_context_reference] This file should reference 'urn:nasa:pds:context:target:satellite.saturn.narvi' because its child product with LIDVID urn:nasa:pds:vg1-saturn-pos-11 coords:data-sedr:sedr-11::1.0 references it. WARNING [warning.integrity.missing_context_reference] This file should reference 'urn:nasa:pds:context:target:satellite.saturn.titan' because its child product with LIDVID urn:nasa:pds:vg1-saturn-pos-11 coords:data-sedr::1.0 references it. 2 integrity check(s) completed PASS: file:/Users/rchen/Desktop/test/val69/data-sedr/SEDR_L1.xml 3 integrity check(s) completed Summary: 0 error(s) 2 warning(s) Product Validation Summary: 3 product(s) passed 0 product(s) failed 0 product(s) skipped Referential Integrity Check Summary: 3 check(s) passed 0 check(s) failed 0 check(s) skipped Message Types: 2 warning.integrity.missing_context_reference End of Report Completed execution in 4481 msRN_1C00_1BCD.xml</p> <p>Step 2: standard good message</p>
--	---

Test ID	VAL.2
Issue ID	validate#308
Issue Type	requirement
Issue Description	As a user, I want to check that all Internal References are valid references to other PDS4 products within the current validating bundle
Comments	Fail: reopened val#308
Test Steps	<p>Get test file from https://github.com/NASA-PDS/validate/tree/main/src/test/resources/github308 Run validate against test file</p> <ol style="list-style-type: none"> 1. validate -R pds4.bundle -t val308a 2. diff -r val308a val308b 3. validate -R pds4.bundle -t val308b
Test Results	<p>Step 1: should be standard good message, but validate#69 got in the way PDS Validate Tool Report Configuration: Version 2.2.0-SNAPSHOT Date 2021-10-26T02:33:46Z Parameters: Targets [file:/Users/rchen/Desktop/test/val308a/] 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 /Users/rchen/PDS4tools/validate/resources/registered_context_products.json</p>

	<p>Product Level Validation Results</p> <p>PASS: file:/Users/rchen/Desktop/test/val308a/bundle-voyager1-pls-sat-1.0.xml</p> <p>1 product validation(s) completed</p> <p>PASS: file:/Users/rchen/Desktop/test/val308a/browse-ion-moments/collection-browse-ion-moments-1.0.xml</p> <p>2 product validation(s) completed</p> <p>PASS: file:/Users/rchen/Desktop/test/val308a/browse-ion-moments/ION_MOM.xml</p> <p>3 product validation(s) completed</p> <p>PASS: file:/Users/rchen/Desktop/test/val308a/data-ion-moments-96sec/collection-data-ion-moments-96s-1.0.xml</p> <p>4 product validation(s) completed</p> <p>PASS: file:/Users/rchen/Desktop/test/val308a/data-ion-moments-96sec/ION_MOM.xml</p> <p>5 product validation(s) completed</p> <p>PDS4 Bundle Level Validation Results</p> <p>PASS: file:/Users/rchen/Desktop/test/val308a/browse-ion-moments/collection-browse-ion-moments-1.0.xml</p> <p>1 integrity check(s) completed</p> <p>PASS: file:/Users/rchen/Desktop/test/val308a/bundle-voyager1-pls-sat-1.0.xml</p> <p>WARNING [warning.integrity.missing_context_reference] This file should reference 'urn:nasa:pds:vg1-pls-sat:data-ion-moments-96sec:ion-mom' because its child product with LIDVID urn:nasa:pds:vg1-pls-sat:browse-ion-moments:ion-mom::1.0 references it.</p> <p>WARNING [warning.integrity.missing_context_reference] This file should reference 'urn:nasa:pds:vg1-pls-sat:browse-ion-moments:ion-mom' because its child product with LIDVID urn:nasa:pds:vg1-pls-sat:data-ion-moments-96sec:ion-mom::1.0 references it.</p> <p>2 integrity check(s) completed</p> <p>PASS: file:/Users/rchen/Desktop/test/val308a/data-ion-moments-96sec/collection-data-ion-moments-96s-1.0.xml</p> <p>3 integrity check(s) completed</p> <p>PASS: file:/Users/rchen/Desktop/test/val308a/data-ion-moments-96sec/ION_MOM.xml</p> <p>4 integrity check(s) completed</p> <p>PASS: file:/Users/rchen/Desktop/test/val308a/browse-ion-moments/ION_MOM.xml</p> <p>5 integrity check(s) completed</p> <p>Summary:</p> <p>0 error(s)</p> <p>2 warning(s)</p> <p>Product Validation Summary:</p> <p>5 product(s) passed</p> <p>0 product(s) failed</p> <p>0 product(s) skipped</p> <p>Referential Integrity Check Summary:</p> <p>5 check(s) passed</p> <p>0 check(s) failed</p> <p>0 check(s) skipped</p> <p>Message Types:</p> <p>2 warning.integrity.missing_context_reference</p> <p>End of Report</p> <p>Completed execution in 6189 ms</p> <p>Step 2:</p> <pre>diff -r val308a/browse-ion-moments/ION_MOM.xml val308b/browse-ion-moments/ION_MOM.xml 89c89 < <lid_reference>urn:nasa:pds:vg1-pls-sat:data-ion-moments-96sec:ion-mom</lid_reference> --- > <lid_reference>urn:nasa:pds:vg1-pls-sat:data-ion-moments-96sec:nonexistentxxx</lid_reference> <!-- val308 should catch this --> diff -r val308a/data-ion-moments-96sec/ION_MOM.xml val308b/data-ion-moments-96sec/ION_MOM.xml 113a114,117 > <Internal_Reference> <!-- val308: validate won't catch this yet--> > <lid_reference>urn:nasa:pds:mess-mag-kt17-model-residuals:document:xxxnoexistent</lid_reference> > <reference_type>data_to_document</reference_type> > </Internal_Reference></pre> <p>Step 3: the first diff above should cause the validate#308 warning or error – a browse product refers to a missing data product in the same bundle. The second diff should be ignored for now, a reference to a LID not in this bundle. Unfortunately, neither gets picked up, so output is same as step 1.</p>
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Test ID	VAL.3
Issue ID	validate#368
Issue Type	Defect
Issue Description	Product referential integrity check throws invalid WARNINGs
Comments	Pass
Test Steps	<pre> Step 1. gchen@dhcp-137-79-237-21 pds % cd pds4test.build12.0/testValidate Step 2. gchen@dhcp-137-79-237-21 testValidate % validate -t github368/valid/bundle_kaguya_derived.xml </pre>
Test Results	<pre> PDS Validate Tool Report Configuration: Version 2.1.0 Date 2021-11-01T04:02:42Z Parameters: Targets [file:/Users/gchen/pds/pds4test.build12.0/testValidate/github 368/valid/bundle_kaguya_derived.xml] Severity Level WARNING Recurse Directories true File Filters Used [*.*ml, *.XML] Data Content Validation on Product Level Validation on Max Errors 100000 Registered Contexts File /Users/gchen/pds/PDS4tools/validate/resources/registered_cont ext_products.json Product Level Validation Results PASS: file:/Users/gchen/pds/pds4test.build12.0/testValidate/github3 68/valid/bundle_kaguya_derived.xml 1 product validation(s) completed Summary: </pre>

	<p>0 error(s) 0 warning(s)</p> <p>Product Validation Summary: 1 product(s) passed 0 product(s) failed 0 product(s) skipped</p> <p>Referential Integrity Check Summary: 0 check(s) passed 0 check(s) failed 0 check(s) skipped</p> <p>End of Report Completed execution in 4286 ms</p>
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Test ID	VAL.4
Issue ID	validate#372
Issue Type	Defect
Issue Description	Issues with logic for reading latest version of collections, and file read logging lost with v2.* of validate.
Comments	Pass
Test Steps	<p>Download the data file and its label from https://pds-geosciences.wustl.edu/messenger/mess-h-rss_mla-5-sdp-v1/messrs_1001/data/shbdr/jgmess_160av01_shb.dat and https://pds-geosciences.wustl.edu/messenger/mess-h-rss_mla-5-sdp-v1/messrs_1001/data/shbdr/jgmess_160av01_shb.xml.</p> <p>Part1.</p> <pre>% validate -R pds4.bundle --skip-content-validation -r report_github69_bundle_invalid.json -s json -t src/test/resources/github69/invalid/bundle_kaguya_derived.xml</pre> <p>Part 2.</p> <pre>validate -R pds4.bundle --skip-content-validation -r report_github69_bundle_invalid.json -s json -t src/test/resources/github69/invalid/bundle_kaguya_derived.xml >& t10</pre>

Test Results	<p>Part 1:</p> <pre>ps-128-149-83-82:validate johnengelke\$ validate -R pds4.bundle --skip-content-validation -r report_github69_bundle_invalid.json -s json -t src/test/resources/github69/invalid/bundle_kaguya_derived.xml Completed execution in 5704 ms</pre> <pre>ps-128-149-83-82:validate johnengelke\$ ls report_github69_bundle_invalid.json report_github69_bundle_invalid.json ps-128-149-83-82:validate johnengelke\$ md5 report_github69_bundle_invalid.json MD5 (report_github69_bundle_invalid.json) = b23bfd841c58014acae3266df47aa9ab ps-128-149-83-82:validate johnengelke\$</pre> <p>Part 2:</p> <pre>ps-128-149-83-82:validate johnengelke\$ grep label report_github69_bundle_invalid.json grep doc_collection "label": "file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github69/invalid/data_spectra/spectra_doc_collection_inventory_2.xml", "label": "file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github69/invalid/data_spectra/spectra_doc_collection_inventory_2.xml", "label": "file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github69/invalid/data_spectra/spectra_doc_collection_inventory.xml", "label": "file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github69/invalid/data_spectra/spectra_doc_collection_inventory_2.xml", "label": "file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github69/invalid/data_spectra/spectra_doc_collection_inventory.xml", ps-128-149-83-82:validate johnengelke\$ ps-128-149-83-82:validate johnengelke\$ ps-128-149-83-82:validate johnengelke\$ egrep "Results label" report_github69_bundle_invalid.json egrep -v allowUnlabeledFiles cat -n 1 "productLevelValidationResults": [2 "label": "file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github69/invalid/bundle_kaguya_derived_2.xml", 3 "label": "file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github69/invalid/data_spectra/spectra_doc_collection_inventory_2.xml", 4 "label": "file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github69/invalid/bundle_kaguya_derived.xml",</pre>
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5	"label": "file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github69/invalid/data_spectra/kgrs_calibrated_spectra_per4.xml",
6	"label": "file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github69/invalid/data_spectra/kgrs_calibrated_spectra_per1.xml",
7	"label": "file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github69/invalid/data_spectra/spectra_data_collection_inventory.xml",
8	"label": "file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github69/invalid/data_spectra/kgrs_calibrated_spectra_per3.xml",
9	"label": "file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github69/invalid/data_spectra/kgrs_calibrated_spectra_per2.xml",
10	"label": "file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github69/invalid/data_spectra/spectra_doc_collection_inventory_2.xml",
11	"label": "file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github69/invalid/data_spectra/spectra_data_collection_inventory_2.xml",
12	"label": "file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github69/invalid/data_spectra/spectra_doc_collection_inventory.xml",
13	"PDS4BundleLevelValidationResults": [
14	"label": "file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github69/invalid/data_spectra/spectra_data_collection_inventory.xml",
15	"label": "file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github69/invalid/data_spectra/spectra_doc_collection_inventory_2.xml",
16	"label": "file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github69/invalid/data_spectra/spectra_data_collection_inventory_2.xml",
17	"label": "file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github69/invalid/data_spectra/spectra_doc_collection_inventory.xml",
18	"label": "file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github69/invalid/bundle_kaguya_derived.xml",
19	"label": "file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github69/invalid/report_github69_bundle_invalid.json",
20	"type": "warning.file.not_referenced_in_label",
21	"message": "File is not referenced by any label"

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22      "label":
"file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github
69/invalid/data_spectra/kgrs_calibrated_spectra_per1.xml",
23      "label":
"file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github
69/invalid/data_spectra/kgrs_calibrated_spectra_per2.xml",
24      "label":
"file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github
69/invalid/data_spectra/kgrs_calibrated_spectra_per3.xml",
25      "label":
"file:/System/Volumes/Data/sourcecode/source/pds/validate/src/test/resources/github
69/invalid/data_spectra/kgrs_calibrated_spectra_per4.xml",
26      "messageType": "warning.file.not_referenced_in_label",

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Test ID	VAL.5
Issue ID	validate#318
Issue Type	Defect
Issue Description	B12.0 Content Validation Improvements
Comments	Testing not required: Parent Issue of #314; #164; #303; #57
Test Plan	

Test ID	VAL.6
Issue ID	validate#314
Issue Type	Defect
Issue Description	Revert #9: Do not throw ERROR message when ASCII Numeric field consists of only white space
Comments	per DDWG, this ticket will be closed as wontfix. #9 solution will remain as-is
Test Plan	Current state: validate passes Table_Character, fails Table_Delimited <ol style="list-style-type: none"> 1. diff val314a.xml val314b.xml 2. validate -t val314a.xml 3. validate -t val314b.xml

	<p>Results:</p> <p>Step 1:</p> <pre> 70c70 < <Table_Character> --- > <Table_Delimited> 72a73 > <parsing_standard_id>PDS DSV 1</parsing_standard_id> 75c76,77 < <Record_Character> --- > <field_delimiter>Comma</field_delimiter> > <Record_Delimited> 78,79c80 < <record_length unit="byte">33</record_length> < <Field_Character> --- > <Field_Delimited> 82d82 < <field_location unit="byte">1</field_location> 84d83 < <field_length unit="byte">17</field_length> 86,87c85,86 < </Field_Character> < <Field_Character> --- > </Field_Delimited> > <Field_Delimited> 90d88 < <field_location unit="byte">19</field_location> 92d89 < <field_length unit="byte">13</field_length> 94,96c91,93 < </Field_Character> < </Record_Character> < </Table_Character> --- > </Field_Delimited> > </Record_Delimited> > </Table_Delimited> </pre> <p>Step 2: standard good message</p> <p>Step 3:</p> <pre> PDS Validate Tool Report Configuration: Version 2.2.0-SNAPSHOT Date 2021-10-26T04:12:15Z Parameters: Targets [file:/Users/rchen/Desktop/test/val314b.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 /Users/rchen/PDS4tools/validate/resources/registered_context_products.json Product Level Validation Results FAIL: file:/Users/rchen/Desktop/test/val314b.xml Begin Content Validation: file:/Users/rchen/Desktop/test/val314.tab ERROR [error.table.field_value_data_type_mismatch] table 1, record 2, field 2: Value does not match its data type 'ASCII_Integer': ' ' does not match the pattern '[+-]?d+' End Content Validation: file:/Users/rchen/Desktop/test/val314.tab 1 product validation(s) completed Summary: 1 error(s) 0 warning(s) Product Validation Summary: 0 product(s) passed </pre>
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	<pre> 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.table.field_value_data_type_mismatch End of Report Completed execution in 3611 msConfiguration:</pre>
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Test ID	VAL.7
Issue ID	validate#164 validate#366
Issue Type	Defect
Issue Description	As a user, I want to validate PDF files are PDF/A Disable check if file is PDF/A if --skip-content-validation is enabled
Comments	Pass
Test Steps	<ol style="list-style-type: none"> 1. diff val164a.xml val164b.xml 2. validate -t val164a.xml 3. validate -t val164b.xml 4. validate -skip-content-validation -t val164b.xml
Test Results	<pre> Step 1: 60c60 < <file_name>val164a.pdf</file_name> --- > <file_name>val164b.pdf</file_name> <!-- the PDF/A-2b one --> Step 2: standard good message Step 3: PDS Validate Tool Report Configuration: Version 2.2.0-SNAPSHOT Date 2021-10-26T04:32:47Z Parameters: Targets [file:/Users/rchen/Desktop/test/val164b.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 /Users/rchen/PDS4tools/validate/resources/registered_context_products.json Product Level Validation Results FAIL: file:/Users/rchen/Desktop/test/val164b.xml ERROR [error.pdf.file.not_pdfa_compliant] Invalid PDF/A version detected. Expected: 1a or 1b. Actual: 2b 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.pdf.file.not_pdfa_compliant</pre>

	End of Report Completed execution in 3939 ms Step 4: standard good message
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Test ID	VAL.8
Issue ID	validate#303
Issue Type	Defect
Issue Description	As a user, I want to the raise a WARNING if the object-defined size in the label does not match the file_size value.
Comments	Pass
Test Steps	<ol style="list-style-type: none"> 1. diff val303a.xml val303b.xml 2. validate -t val303a.xml 3. validate -t val303b.xml
Test Results	<p>Step 1:</p> <pre> 78c78 < <offset unit="byte">23040</offset> --- > <offset unit="byte">46080</offset> <!-- value too big. was 23040 --> </pre> <p>Step 2: standard good message</p> <p>Step 3:</p> <pre> PDS Validate Tool Report Configuration: Version 2.2.0-SNAPSHOT Date 2021-10-26T05:14:20Z Parameters: Targets [file:/Users/rchen/Desktop/test/val303b.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 /Users/rchen/PDS4tools/validate/resources/registered_context_products.json Product Level Validation Results FAIL: file:/Users/rchen/Desktop/test/val303b.xml WARNING [error.label.filesize_mismatch] Object-defined size+offset is greater than actual file size in data file: 4240384 > 4219200 file:/Users/rchen/Desktop/test/val303.fits Begin Content Validation: file:/Users/rchen/Desktop/test/val303.fits FATAL_ERROR [error.array.bad_file_read] array 1: Error occurred while reading data file: Error occurred while trying to read data at location (1019, 849): null End Content Validation: file:/Users/rchen/Desktop/test/val303.fits 1 product validation(s) completed Summary: 1 error(s) 1 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 1 error.array.bad_file_read </pre> <p>End of Report Completed execution in 4389 ms</p>

Test ID	VAL.9
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Issue ID	validate#57
Issue Type	Defect
Issue Description	As a user, I want to be warned when there are alphanumeric characters between fields in Table Character
Comments	Pass
Test Steps	<ol style="list-style-type: none"> 1. diff val57a.xml val57b.xml 2. diff val57a.tab val57b.tab 3. validate --strict-field-checks -t val57a.xml 4. validate --strict-field-checks -t val57b.xml
Test Results	<p>Step 1:</p> <pre> 72c72 < <file_name>val57a.tab</file_name> --- > <file_name>val57b.tab</file_name> </pre> <p>Step 2:</p> <pre> 2c2 < 2019-08-06T00:01:00Z This is a test 1111 2222 3333 4444 --- > 2019-08-06T00:01:00Z,This is a test q1111 2222 3333 4444 4c4 < 2019-08-06T00:03:00Z This is a test 1111 2222 3333 4444 --- > 2019-08-06T00:03:00ZaThis is a test b1111c2222d3333e4444 </pre> <p>Step 3: standard good message</p> <p>Step 4:</p> <pre> PDS Validate Tool Report Configuration: Version 2.2.0-SNAPSHOT Date 2021-10-26T05:50:45Z Parameters: Targets [file:/Users/rchen/Desktop/test/val57b.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 /Users/rchen/PDS4tools/validate/resources/registered_context_products.json Product Level Validation Results PASS: file:/Users/rchen/Desktop/test/val57b.xml WARNING [warning.table.characters_between_fields] Unexpected alphanumeric characters found between fields in record 2: [.] found between fields 1 and 2 WARNING [warning.table.characters_between_fields] Unexpected alphanumeric characters found between fields in record 2: [q] found between fields 2 and 3 1 product validation(s) completed Summary: 0 error(s) 2 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: 2 warning.table.characters_between_fields End of Report Completed execution in 3966 ms </pre>

Test ID	VAL.10
Issue ID	validate#310
Issue Type	Defect
Issue Description	Validate missing collections in bundle after CCB-282 updates
Comments	Pass
Test Steps	<ol style="list-style-type: none"> 1. get test bundle from https://github.com/NASA-PDS/validate/tree/main/src/test/resources/github310 2. using validate v2.1.0-SNAPSHOT 3. % validate -R pds4.bundle -t github310/valid 4. % validate -R pds4.bundle -t github310/invalid <p>step 3 should pass event collection file name doesn't follow by ' _ '</p> <p>step 4 should fail before collection name is collectioX.</p>
Test Result	<pre> PDS4 Bundle Level Validation Results PASS: file:/Users/gchen/pds/pds4test.build12.0/testValidate/github310/valid/data/collection-data-bst-1.0.xml 1 integrity check(s) completed PASS: file:/Users/gchen/pds/pds4test.build12.0/testValidate/github310/valid/bundle.xml WARNING [warning.integrity.missing_context_reference] The context reference 'urn:nasa:pds:context:file:st:1.0.' (Disable with --skip-context-reference-check flag) WARNING [warning.integrity.missing_context_reference] The context reference 'urn:nasa:pds:context:file:st:1.0.' (Disable with --skip-context-reference-check flag) WARNING [warning.integrity.missing_context_reference] The context reference 'urn:nasa:pds:context:file:st:1.0.' (Disable with --skip-context-reference-check flag) 2 integrity check(s) completed PASS: file:/Users/gchen/pds/pds4test.build12.0/testValidate/github310/valid/data/MAGBST051790239_V1.xml 3 integrity check(s) completed PASS: file:/Users/gchen/pds/pds4test.build12.0/testValidate/github310/valid/data/MAGBST051782340_V1.xml 4 integrity check(s) completed Summary: 2 error(s) 3 warning(s) Product Validation Summary: 2 product(s) passed 2 product(s) failed 0 product(s) skipped Referential Integrity Check Summary: 4 check(s) passed 0 check(s) failed 0 check(s) skipped Message Types: 2 error.table.records_mismatch 3 warning.integrity.missing_context_reference End of Report Completed execution in 4913 ms </pre>

Test ID	VAL.11
Issue ID	validate#325
Issue Type	Defect
Issue Description	Validate Incorrectly Throws Error When Embedded Field_Character Contains <CR><LF>.
Comments	Pass
Test Steps	<ol style="list-style-type: none"> 1. Get test data from https://github.com/NASA-PDS/validate/tree/main/src/test/resources/github325 2. using validate v2.1.0

	<p>3. validate crs009x.xml</p> <p>crs009x.{tab, xml} should pass.</p>
Test Result	<pre> gchen@Johns-MacBook-Pro testValidate % validate github325/crs009x.xml PDS Validate Tool Report Configuration: Version 2.1.0 Date 2021-10-26T06:42:51Z Parameters: Targets [file:/Users/gchen/pds/pds4test.build12.0/testValidate/github325/crs009x.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 /Users/gchen/pds/PDS4tools/validate/resources/registered_context_products.json Product Level Validation Results PASS: file:/Users/gchen/pds/pds4test.build12.0/testValidate/github325/crs009x.xml 1 product validation(s) completed Summary: 0 error(s) 0 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 End of Report Completed execution in 4032 ms </pre>

Test ID	VAL.12
Issue ID	validate#326
Issue Type	Defect
Issue Description	File-size check fails for large data files.
Comments	Pass
Test Steps	<p>Since we need to test for data file size > 4gb, we can use the data files in pds-dev3 to avoid downloading such files to our laptop.</p> <ol style="list-style-type: none"> 1. Ssh pds-dev3 2. Set up validate v2.1.0-SNAPSHOT 3. Validate -R pds4.label --skip-content-validation --skip-context-validation -r report_github326_label_valid.json -s json -t /data/home/pds4/qchau/test_artifacts/github326/spectra_data_collection_inventory.xml >& t1 <p>step 3. Should pass.</p>
Test Result	vpn-128-149-240-66:326 johnengelke\$ validate -R pds4.label --skip-content-validation --skip-context-validation -r report_github326_label_valid.json -s json -t

	<pre> /sourcecode/source/pds/validate/src/test/resources/github326/spectra_data_collectio n_inventory.xml > 310_execution.txt Completed execution in 13485 ms { "title": "PDS Validation Tool Report", "configuration": { "version": "2.1.0-SNAPSHOT", "date": "2021-09-30T22:46:38Z" }, "parameters": { "targets": "[file:/sourcecode/source/pds/validate/src/test/resources/github326/spectra_data_co llection_inventory.xml]", "ruleType": "pds4.label", "severityLevel": "WARNING", "recurseDirectories": "true", "fileFiltersUsed": "[*.xml, *.XML]", "dataContentValidation": "off", "productLevelValidation": "on", "maxErrors": "100000", "registeredContextsFile": "/sourcecode/source/pds/validate- latest/resources/registered_context_products.json" }, "productLevelValidationResults": [{ "status": "PASS", "label": "file:/sourcecode/source/pds/validate/src/test/resources/github326/spectra_data_col lection_inventory.xml", "messages": [], "fragments": [], "dataContents": [] }], "summary": { "totalErrors": 0, "totalWarnings": 0, "messageTypes": [] } } </pre>
--	--

Test ID	VAL.13
Issue ID	validate#327

Issue Type	Defect
Issue Description	validate fails to process large data file
Comments	Pass
Test Plan	Same test procedures as Test Validate#326.
Test Result	vpn-128-149-240-66:326 johnengelke\$ validate -R pds4.label --skip-content-validation --skip-context-validation -r report_github326_label_valid.json -s json -t /sourcecode/source/pds/validate/src/test/resources/github326/spectra_data_collection_inventory.xml > 310_execution.txt Completed execution in 13485 ms

Test ID	VAL.14
Issue ID	validate#357
Issue Type	Defect
Issue Description	Validate allows CRLF within a Table_Delimited field.
Comments	Pass
Test Steps	1. validate -t val357.xml
Test Results	<p>Step 1: Record 2 has extra LF; record 7 has an extra CR</p> <p>PDS Validate Tool Report Configuration: Version 2.2.0-SNAPSHOT Date 2021-10-26T06:30:14Z Parameters: Targets [file:/Users/rchen/Desktop/test/val357.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 /Users/rchen/PDS4tools/validate/resources/registered_context_products.json Product Level Validation Results FAIL: file:/Users/rchen/Desktop/test/val357.xml Begin Content Validation: file:/Users/rchen/Desktop/test/val357.csv ERROR [error.table.missing_CRLF] table 1, record 2: Record does not end in carriage-return line feed. ERROR [error.validation.invalid_field_value] table 1, record 2, field 24: Field value cannot contain a carriage return or linefeed for Table_Delimited ERROR [error.validation.invalid_field_value] table 1, record 6, field 25: Field value cannot contain a carriage return or linefeed for Table_Delimited ERROR [error.table.missing_CRLF] table 1, record 7: Record does not end in carriage-return line feed. End Content Validation: file:/Users/rchen/Desktop/test/val357.csv 1 product validation(s) completed</p> <p>Summary: 4 error(s) 0 warning(s) Product Validation Summary: 0 product(s) passed 1 product(s) failed 0 product(s) skipped Referential Integrity Check Summary:</p>

	<p>0 check(s) passed 0 check(s) failed 0 check(s) skipped Message Types: 2 error.validation.invalid_field_value 2 error.table.missing_CRLF End of Report Completed execution in 3954 ms</p>
--	--

Test ID	VAL.15
Issue ID	validate#360
Issue Type	Defect
Issue Description	validate does not parse colon in Windows path.
Comments	Pass
Test Plan	<ol style="list-style-type: none"> 1. Setup validate v2.1.0 on Windows system. 2. re-use test data file in attachment. 3. validate SuperCam_Bundle_SIS.xml -R pds4.labe 4. compare result with user provide result file in attachment.
Test Results	<p>jengelke@RAYL-AI882092 MINGW64 /c/sourcecode/source/pds/test-validations/sprint4/360</p> <p>\$ validate /c/sourcecode/source/pds/validate-2.1.0-SNAPSHOT/src/test/resources/github360/SuperCam_Bundle_SIS.xml -R pds4.label > test_360-1.txt</p> <p>jengelke@RAYL-AI882092 MINGW64 /c/sourcecode/source/pds/test-validations/sprint4/360</p> <p>\$</p> <p>C:\sourcecode\source\pds\test-validations\sprint4\360>validate -t "C:\sourcecode\source\pds\validate-2.1.0-SNAPSHOT\src\test\resources\github360\SuperCam_Bundle_SIS.xml" -R pds4.label</p> <p>Completed execution in 4271 ms</p> <p>C:\sourcecode\source\pds\test-validations\sprint4\360></p>


```

Product Level Validation Results

FAIL: file:/C:/sourcecode/source/pds/validate-2.1.0-SNAPSHOT/src/test/resources/github360/SuperCam_Bundle_SIS.xml
      ERROR [error.label.missing_file] URI reference does not exist: file:/C:/sourcecode/source/pds/validate-2.1.0-SNAPSHOT/src/test/resources/github360/
      SuperCam_Bundle_SIS.pdf
      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.missing_file
    
```

Test ID	VAL.16
Issue ID	validate#361
Issue Type	Defect
Issue Description	validate does not check Header of a File_Area_Ancillary nor does not provide a meaningful error message for an incorrect Table_Character offset.
Comments	Pass
Test Steps	<ol style="list-style-type: none"> 1. diff val361a.xml val361b.xml 2. validate -t val361a.xml 3. validate -t val361b.xml
Test Results	<p>Step 1:</p> <pre> 70c70 < <object_length unit="byte">267</object_length> --- > <object_length unit="byte">99999</object_length> </pre> <p>Step 2: standard good message</p> <p>Step 3:</p> <pre> PDS Validate Tool Report Configuration: Version 2.2.0-SNAPSHOT Date 2021-10-26T07:39:01Z Parameters: Targets [file:/Users/rchen/Desktop/test/val361b.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 /Users/rchen/PDS4tools/validate/resources/registered_context_products.json Product Level Validation Results FAIL: file:/Users/rchen/Desktop/test/val361b.xml Begin Content Validation: file:/Users/rchen/Desktop/test/val361b.xml ERROR [error.table.fields_mismatch] table 1: The table offset 268 for object 'Orbit number table' is invalid. The previously defined object ends at byte 99999 End Content Validation: file:/Users/rchen/Desktop/test/val361b.xml 1 product validation(s) completed Summary: 1 error(s) 0 warning(s) Product Validation Summary: 0 product(s) passed 1 product(s) failed </pre>

	<p>0 product(s) skipped Referential Integrity Check Summary: 0 check(s) passed 0 check(s) failed 0 check(s) skipped Message Types: 1 error.table.fields_mismatch End of Report Completed execution in 3864 ms</p>
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Test ID	VAL.17
Issue ID	validate#364
Issue Type	Defect
Issue Description	validate does not allow ".XML" as an extension for a label file.
Comments	Pass
Test Step	<ol style="list-style-type: none"> 1. get test data files from https://github.com/NASA-PDS/validate/tree/main/src/test/resources/github364. 2. validate --skip-context-validation --skip-content-validation --target github364/MIS000XXX_2021001T000000_DEV0_2021001T0000_RAW010.XML <p>Step 3 should pass with all CAP file name.</p>
Test Result	<pre>vpn-128-149-240-66:364 johnengelke\$ validate --skip-context-validation --skip-content-validation --target /sourcecode/source/pds/validate/src/test/resources/github364/MIS000XXX_2021001T000000_DEV0_2021001T0000_RAW010.XML > test_364-1.txt 2>&1</pre> <pre>vpn-128-149-240-66:364 johnengelke\$</pre> <p>No filename error</p>

Test ID	VAL.18
Issue ID	validate#375
Issue Type	Defect
Issue Description	unclear error message for field count matching.
Comments	Pass
Test Steps	<ol style="list-style-type: none"> 1. set up validate 2. download testing data from attachment 3. validate -R pds4.bundle --skip-context-reference-check -r report_github375_bundle.json -s json -t "PATH TO YOUR DATA FILE"/bundle_gbo.ast.primass-l.spectra.xml > & t1

<p>Test Results</p>	<pre> ps-128-149-83-82:validate johnengelke\$ cd ../test-validations/375/ ps-128-149-83-82:375 johnengelke\$ validate -R pds4.bundle --skip- context-reference-check -r report_github375_bundle.json -s json -t h/bundle_gbo.ast.primass-l.spectra.xml > & t1 -bash: syntax error near unexpected token `&' ps-128-149-83-82:375 johnengelke\$ validate -R pds4.bundle --skip- context-reference-check -r report_github375_bundle.json -s json -t h/bundle_gbo.ast.primass-l.spectra.xml >& t1 ps-128-149-83-82:375 johnengelke\$ egrep "label status" report_github375_bundle.json "allowUnlabeledFiles": "false", "status": "PASS", "label": "file:/System/Volumes/Data/sourcecode/source/pds/test- validations/375/h/bundle_gbo.ast.primass-l.spectra.xml", "status": "PASS", "label": "file:/System/Volumes/Data/sourcecode/source/pds/test- validations/375/h/data/collection_gbo.ast.primass-l.spectra_data.xml", "status": "PASS", "label": "file:/System/Volumes/Data/sourcecode/source/pds/test- validations/375/h/data/primassl_visible_spectral_data_collection.xml", "status": "PASS", "label": "file:/System/Volumes/Data/sourcecode/source/pds/test- validations/375/h/data/collection_gbo.ast.primass-l.spectra_data.xml", "status": "FAIL", "label": "file:/System/Volumes/Data/sourcecode/source/pds/test- validations/375/h/.DS_Store", "type": "warning.file.not_referenced_in_label", "message": "File is not referenced by any label" </pre>
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	<p>"status": "PASS",</p> <p>"label": "file:/System/Volumes/Data/sourcecode/source/pds/test-validations/375/h/bundle_gbo.ast.primass-l.spectra.xml",</p> <p>"status": "PASS",</p> <p>"label": "file:/System/Volumes/Data/sourcecode/source/pds/test-validations/375/h/data/primassl_visible_spectral_data_collection.xml",</p> <p>"messageType": "warning.file.not_referenced_in_label",</p>
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Test ID	VAL.19
Issue ID	validate#379
Issue Type	Defect
Issue Description	FileService:printStackTraceToFile:ERROR when validating a product with overlapping fields
Comments	Pass
Test Steps	<ol style="list-style-type: none"> 1. set up testing environment 2. download test data from attachment. 3. validate -target /test data folder/mix_cal_hk_fpac_report_20181204.xml <p>Validate runs and reports the product is not valid because it defines overlapping fields. It should not created a stack trace report.</p> <p>Should not see this: FileService:printStackTraceToFile:ERROR: This function can only write to file that ends with .txt or .log</p>
Test Results	<pre>ps-128-149-83-82:379 johnengelke\$ ls -laF total 1000 drwxr-xr-x 5 johnengelke wheel 160 Sep 6 18:18 ./ drwxr-xr-x 6 johnengelke wheel 192 Sep 6 18:14 ../ -rw-rw-r--@ 1 johnengelke wheel 432003 Jul 26 07:36 mix_cal_hk_fpac_report_20181204.tab -rw-rw-r--@ 1 johnengelke wheel 58629 Jul 26 07:36 mix_cal_hk_fpac_report_20181204.xml</pre>

```
-rw-r--r--@ 1 johnengelke staff 15949 Sep 6 18:14
mix_cal_hk_fpac_report_20181204.zip

ps-128-149-83-82:379 johnengelke$ java --version

java 11.0.3 2019-04-16 LTS

Java(TM) SE Runtime Environment 18.9 (build 11.0.3+12-LTS)

Java HotSpot(TM) 64-Bit Server VM 18.9 (build 11.0.3+12-LTS,
mixed mode)

ps-128-149-83-82:379 johnengelke$ validate -V

gov.nasa.pds:validate

Version 2.1.0-SNAPSHOT

Release Date: 2021-09-02 21:47:06

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ps-128-149-83-82:379 johnengelke$ validate --target
mix_cal_hk_fpac_report_20181204.xml

PDS Validate Tool Report

Configuration:

Version          2.1.0-SNAPSHOT

Date             2021-09-07T01:21:45Z

Parameters:

Targets
[file:/System/Volumes/Data/sourcecode/source/pds/test-
validations/379/mix_cal_hk_fpac_report_20181204.xml]

Severity Level   WARNING

Recurse Directories  true
```

	<p>File Filters Used [*.xml, *.XML]</p> <p>Data Content Validation on</p> <p>Product Level Validation on</p> <p>Max Errors 100000</p> <p>Registered Contexts File /sourcecode/source/pds/validate-latest/resources/registered_context_products.json</p> <p>Product Level Validation Results</p> <p>FAIL: file:/System/Volumes/Data/sourcecode/source/pds/test-validations/379/mix_cal_hk_fpac_report_20181204.xml</p> <p> ERROR [error.label.context_ref_not_found] line 46: 'Context product not found: urn:esa:psa:context:investigation:mission.bc</p> <p> ERROR [error.label.context_ref_not_found] line 56: 'Context product not found: urn:esa:psa:context:instrument_host:spacecraft.mpo</p> <p> ERROR [error.label.context_ref_not_found] line 65: 'Context product not found: urn:esa:psa:context:instrument:mixs.mpo</p> <p> Begin Content Validation: file:/System/Volumes/Data/sourcecode/source/pds/test-validations/379/mix_cal_hk_fpac_report_20181204.tab</p> <p> ERROR [error.table.field_value_overlap] table 0, record 1, field 42: This field overlaps the next field. Current field ends at 347. Next field starts at 347 but should be at least at 348</p> <p> End Content Validation: file:/System/Volumes/Data/sourcecode/source/pds/test-validations/379/mix_cal_hk_fpac_report_20181204.tab</p> <p> 1 product validation(s) completed</p> <p>Summary:</p> <p> 4 error(s)</p> <p> 0 warning(s)</p>
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	<p>Product Validation Summary:</p> <p>0 product(s) passed</p> <p>1 product(s) failed</p> <p>0 product(s) skipped</p> <p>Referential Integrity Check Summary:</p> <p>0 check(s) passed</p> <p>0 check(s) failed</p> <p>0 check(s) skipped</p> <p>Message Types:</p> <p>3 error.label.context_ref_not_found</p> <p>1 error.table.field_value_overlap</p> <p>End of Report</p> <p>Completed execution in 18127 ms</p>
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Test ID	VAL.20
Issue ID	validate#380
Issue Type	Defect
Issue Description	stack trace being created during successful validate execution
Comments	Pass
Test Steps	<ol style="list-style-type: none"> 1. download test data from attachment. 2. validate -t uranus_occ_u36_maunakea_380cm <p>Should not see a stack trace log after validate report. stack trace only outputs when a fatal error occurs or uncaught exception.</p>
Test Result	Pass, no stack trace log.

Test ID	VAL.21
Issue ID	validate#381
Issue Type	Defect
Issue Description	validate does not work correctly when the path name contains a space
Comments	Pass
Test Steps	<ol style="list-style-type: none"> 1. duplicate testing folder for validate#375 from h to "h test"

	2. Run validate from within this directory Validate should not fail.
Test Results	Validate succeeded.

Test ID	VAL.22
Issue ID	validate#392
Issue Type	Defect
Issue Description	Validate throws incorrect overlap error when first Field_Bit has length 1
Comments	Pass
Test Steps	<ol style="list-style-type: none"> 1. diff val392a.xml val392b.xml 2. validate -t val392a.xml 3. validate -t val392b.xml
Test Results	<p>Step 1:</p> <pre> 142c142 < <start_bit_location>8</start_bit_location> --- > <start_bit_location>6</start_bit_location> <!-- was 8 --> </pre> <p>Step 2: standard good message</p> <p>Step 3:</p> <pre> PDS Validate Tool Report Configuration: Version 2.2.0-SNAPSHOT Date 2021-10-26T08:18:41Z Parameters: Targets [file:/Users/rchen/Desktop/test/val392b.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 /Users/rchen/PDS4tools/validate/resources/registered_context_products.json Product Level Validation Results FAIL: file:/Users/rchen/Desktop/test/val392b.xml Begin Content Validation: file:/Users/rchen/Desktop/test/val392.dat ERROR [error.table.field_value_overlap] table 1, record 1, field 2: The bit field overlaps the next field. Current stop_bit_location: 7. Next start_bit_location: 6 End Content Validation: file:/Users/rchen/Desktop/test/val392.dat 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.table.field_value_overlap End of Report Completed execution in 4682 ms </pre>

Test ID	VAL.23
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Issue ID	validate#367
Issue Type	Requirement
Issue Description	As a user, I want to validate all files referenced by a Product Document
Comments	Pass
Test Steps	<ol style="list-style-type: none"> diff val367/val367a.xml val367/val367b.xml validate -t val367/val367a.xml validate -t val367/val367b.xml
Test Results	<p>Step 1: 48c48 < <directory_path_name>.</directory_path_name> --- > <directory_path_name>sub1</directory_path_name></p> <p>Step 2: standard good message</p> <p>Step 3: correct ERROR that image isn't in the subdirectory</p> <pre> PDS Validate Tool Report Configuration: Version 2.2.0-SNAPSHOT Date 2021-10-26T09:14:13Z Parameters: Targets [file:/Users/rchen/Desktop/test/val367/val367b.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 /Users/rchen/PDS4tools/validate/resources/registered_context_products.json Product Level Validation Results FAIL: file:/Users/rchen/Desktop/test/val367/val367b.xml ERROR [error.label.missing_file] URI reference does not exist: file:/Users/rchen/Desktop/test/val367/sub1/image001.jpg 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.missing_file End of Report Completed execution in 4902 ms </pre>

Test ID	VAL.24
Issue ID	validate#373
Issue Type	Improvements
Issue Description	Update pds4 version mismatch warning message and problem type.
Comments	Pass
Test Steps	<ol style="list-style-type: none"> validate -R pds4.bundle -5 val373
Test Results	<p>Results:</p> <p>Step 1: warning correctly uses warning.integrity.pds4_version_mismatch</p> <pre> PDS Validate Tool Report </pre>

	<pre> Configuration: Version 2.2.0-SNAPSHOT Date 2021-10-26T10:12:20Z Parameters: Targets [file:/Users/rchen/Desktop/test/val373/] 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 /Users/rchen/PDS4tools/validate/resources/registered_context_products.json Product Level Validation Results PASS: file:/Users/rchen/Desktop/test/val373/bundle-vg1-pra-lowband-6sec-sat-1.0.xml 1 product validation(s) completed PASS: file:/Users/rchen/Desktop/test/val373/document/collection-document-1.0.xml 2 product validation(s) completed PASS: file:/Users/rchen/Desktop/test/val373/document/EPPS_EDR_SIS.xml 3 product validation(s) completed PASS: file:/Users/rchen/Desktop/test/val373/data/PRA.xml 4 product validation(s) completed PASS: file:/Users/rchen/Desktop/test/val373/data/collection-data-1.0.xml 5 product validation(s) completed PDS4 Bundle Level Validation Results PASS: file:/Users/rchen/Desktop/test/val373/document/collection-document-1.0.xml 1 integrity check(s) completed PASS: file:/Users/rchen/Desktop/test/val373/data/collection-data-1.0.xml 2 integrity check(s) completed PASS: file:/Users/rchen/Desktop/test/val373/bundle-vg1-pra-lowband-6sec-sat-1.0.xml 3 integrity check(s) completed PASS: file:/Users/rchen/Desktop/test/val373/data/PRA.xml 4 integrity check(s) completed PASS: file:/Users/rchen/Desktop/test/val373/document/EPPS_EDR_SIS.xml 5 integrity check(s) completed PASS: gov.nasa.pds.validate.ValidateLauncher WARNING [warning.integrity.pds4_version_mismatch] Multiple versions (2) of Information Model (IM) found in this run: [1.13.0.0, 1.15.0.0] for rule pds4.bundle for bundle file:/Users/rchen/Desktop/test/val373/bundle-vg1-pra-lowband-6sec-sat-1.0.xml 6 integrity check(s) completed Summary: 0 error(s) 1 warning(s) Product Validation Summary: 5 product(s) passed 0 product(s) failed 0 product(s) skipped Referential Integrity Check Summary: 6 check(s) passed 0 check(s) failed 0 check(s) skipped Message Types: 1 warning.integrity.pds4_version_mismatch End of Report Completed execution in 8427 ms\ </pre>
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Test ID	VAL.25
Issue ID	validate#374
Issue Type	Improvements
Issue Description	Refactor PDF/A check handling to match with similar product checks
Comments	Pass
Test Steps	<ol style="list-style-type: none"> 1. diff val374a.xml val374b.xml 2. validate -t val374a.xml

<p>PDS Validate Tool Report</p> <p>Configuration:</p> <p>Version 2.1.0</p> <p>Date 2021-11-01T04:35:08Z</p> <p>Parameters:</p> <p>Targets [file:/Users/gchen/pds/pds4test.build12.0/testValidate/val328/]</p> <p>Rule Type pds4.bundle</p> <p>Severity Level WARNING</p> <p>Recurse Directories true</p> <p>File Filters Used [*.xml, *.XML]</p> <p>Data Content Validation on</p> <p>Product Level Validation on</p> <p>Allow Unlabeled Files false</p> <p>Max Errors 100000</p> <p>Registered Contexts File /Users/gchen/pds/PDS4tools/validate/resources/registered_context_products.json</p> <p>Product Level Validation Results</p> <p>PASS: file:/Users/gchen/pds/pds4test.build12.0/testValidate/val328/bundle_misc.xml</p> <p>1 product validation(s) completed</p> <p>PASS: file:/Users/gchen/pds/pds4test.build12.0/testValidate/val328/document_cassini/TITAN_NEUTRALS_UG_ITAR_SEP2011.xml</p> <p>2 product validation(s) completed</p> <p>PASS: file:/Users/gchen/pds/pds4test.build12.0/testValidate/val328/document_cassini/Collection_document_cassini_v1.0.xml</p> <p>3 product validation(s) completed</p> <p>PDS4 Bundle Level Validation Results</p> <p>PASS: file:/Users/gchen/pds/pds4test.build12.0/testValidate/val328/document_cassini/Collection_document_cassini_v1.0.xml</p>
--

	<p>1 integrity check(s) completed</p> <p>PASS: file:/Users/gchen/pds/pds4test.build12.0/testValidate/val328/bundle_misc.xml</p> <p>2 integrity check(s) completed</p> <p>PASS: file:/Users/gchen/pds/pds4test.build12.0/testValidate/val328/document_cassini/TITAN_NEUTRALS_UG_ITAR_SEP2011.xml</p> <p>3 integrity check(s) completed</p> <p>Summary:</p> <p>0 error(s)</p> <p>0 warning(s)</p> <p>Product Validation Summary:</p> <p>3 product(s) passed</p> <p>0 product(s) failed</p> <p>0 product(s) skipped</p> <p>Referential Integrity Check Summary:</p> <p>3 check(s) passed</p> <p>0 check(s) failed</p> <p>0 check(s) skipped</p> <p>End of Report</p> <p>Completed execution in 7887 ms</p>
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Test ID	VAL.27
Issue ID	validate#356
Issue Type	Defect
Issue Description	validate labels error.sub directory.unallowed name as a warning
Comments	PASS
Test Steps	1. validate -R pds4.bundle -t val356
Test Results	<p>Step 1: warning correctly uses warning.sub_directory.unallowed_name</p> <p>PDS Validate Tool Report</p> <p>Configuration:</p> <p>Version 2.2.0-SNAPSHOT</p> <p>Date 2021-10-26T10:43:36Z</p> <p>Parameters:</p> <p>Targets [file:/Users/rchen/Desktop/test/val356/]</p> <p>Rule Type pds4.bundle</p> <p>Severity Level WARNING</p> <p>Recurse Directories true</p>

	<pre> File Filters Used [*.*xml, *.XML] Data Content Validation on Product Level Validation on Allow Unlabeled Files false Max Errors 100000 Registered Contexts File /Users/rchen/PDS4tools/validate/resources/registered_context_products.json Product Level Validation Results PASS: file:/Users/rchen/Desktop/test/val356/bundle_misc.xml 1 product validation(s) completed PASS: file:/Users/rchen/Desktop/test/val356/document_cassini/TITAN_NEUTRALS_UG_ITAR_SEP2011.xml 2 product validation(s) completed PASS: file:/Users/rchen/Desktop/test/val356/document_cassini/Collection_document_cassini_v1.0.xml 3 product validation(s) completed PDS4 Bundle Level Validation Results PASS: file:/Users/rchen/Desktop/test/val356/document_cassini/data/ WARNING [warning.sub_directory.unallowed_name] Directory name is reserved and not in the recommended location in the bundle root directory PASS: file:/Users/rchen/Desktop/test/val356/document_cassini/Collection_document_cassini_v1.0.xml 1 integrity check(s) completed PASS: file:/Users/rchen/Desktop/test/val356/bundle_misc.xml 2 integrity check(s) completed PASS: file:/Users/rchen/Desktop/test/val356/document_cassini/TITAN_NEUTRALS_UG_ITAR_SEP2011.xml 3 integrity check(s) completed Summary: 0 error(s) 1 warning(s) Product Validation Summary: 3 product(s) passed 1 product(s) failed 1 product(s) skipped Referential Integrity Check Summary: 3 check(s) passed 1 check(s) failed 1 check(s) skipped Message Types: 1 warning.sub_directory.unallowed_name End of Report Completed execution in 5115 ms </pre>
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Test ID	IM.1
Issue ID	pds4-information-model#347
Issue Type	task
Issue Description	Create dLDD CCB
Comments	Skip
Test Plan	Do not need to test.

Test ID	IM.2
Issue ID	pds4-information-model#348
Issue Type	Task
Issue Description	Create dLDD Stewardship Teams
Comments	Skip
Test Plan	Do not need to test.

Test ID	IM.3
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Issue ID	pds4-information-model#240 pds4-information-model#330 pds4-information-model#338
Issue Type	task
Issue Description	Improve argument handling using argument parsing library List output of the tool after it completes execution. List the dLDD version in the output JSON data.
Comments	Pass
Test Plan	<pre> 3. ls PDS4_QMRN_* 4. lddtool -pl -V 1C00 im240lddtoolinput.xml 5. ls PDS4_QMRN_*; rm PDS4_QMRN_* 6. lddtool -pl im240lddtoolinput.xml -V 1C00 7. ls PDS4_QMRN_*; rm PDS4_QMRN_* 8. lddtool -pl im240lddtoolinput.xml -V 1C00 -J 9. ls PDS4_QMRN_*; rm PDS4_QMRN_* 10. grep Version PDS4_QMRN_*.JSON 11. lddtool -pl im240lddtoolinput.xml 12. ls PDS4_QMRN_*; rm PDS4_QMRN_* Results: Step 1: If there are any, delete them Step 2: For pds4-information-model#330, note list of output files >> INFO LDDTOOL Version: 13.2.0-SNAPSHOT >> INFO IM Version Id: 1.12.0.0 >> INFO IM Namespace Id: pds >> INFO IM Label Version Id: 1.18 >> INFO Date: Mon Oct 11 00:55:39 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 Class omitted from build - Class Identifier:0001_NASA_PDS_1.pds.Schematron_Rule >> WARNING Class omitted from build - Class Identifier:0001_NASA_PDS_1.pds.Schematron_Assert >>> INFO Init: - Config.Properties Namespace Id Using:pds >>> INFO Init: - LDD Dictionary_Type is Mission >>> WARNING Init: - Config.Properties Namespace Id Not Found:qmrn >>> WARNING Header: - New steward has been specified:geo >>> WARNING Header: - New namespace id has been specified:qmrn -- LDDTool Execution Summary -- 5 warning(s) 0 error(s) 0 fatal error(s) Input: - IM Version: 1C00 - PDS4 Flag: true - LDD Flag: true - IM Version: true - Ingest LDD(s): im240lddtoolinput.xml Output: - ./PDS4_QMRN_1C00_1BCD.xsd - ./PDS4_QMRN_1C00_1BCD.sch - ./PDS4_QMRN_1C00_1BCD.xml >> INFO Exit(0) Step 3: For pds4-information-model#240, -V set PDS4 version to 1C00 PDS4_QMRN_1C00_1BCD.csv PDS4_QMRN_1C00_1BCD.sch PDS4_QMRN_1C00_1BCD.txt PDS4_QMRN_1C00_1BCD.xml PDS4_QMRN_1C00_1BCD.xsd </pre>

	<p>Steps 4 and 5: same. The -V option placed elsewhere has same effect</p> <p>Step 6: Same as before except JSON output added</p> <pre>[snip] Input: - IM Version: 1C00 - PDS4 Flag: true - LDD Flag: true - IM Version: true - Export JSON Flag: true - Ingest LDD(s): im240lddtoolinput.xml Output: - ./PDS4_QMRN_1C00_1BCD.xsd - ./PDS4_QMRN_1C00_1BCD.sch - ./PDS4_QMRN_1C00_1BCD.xml - ./PDS4_QMRN_1C00_1BCD.JSON >> INFO Exit(0)</pre> <p>Step 7:</p> <pre>PDS4_QMRN_1C00_1BCD.JSON PDS4_QMRN_1C00_1BCD.csv PDS4_QMRN_1C00_1BCD.sch PDS4_QMRN_1C00_1BCD.txt PDS4_QMRN_1C00_1BCD.xml PDS4_QMRN_1C00_1BCD.xsd</pre> <p>Step 8: Previously, only [IM] Version would show up</p> <pre>"IM Version": "1.12.0.0", "LDD Version": "1.11.12.13",</pre> <p>Step 9:</p> <pre>>> INFO LDDTOOL Version: 13.2.0-SNAPSHOT >> INFO IM Version Id: 1.17.0.0 >> INFO IM Namespace Id: pds >> INFO IM Label Version Id: 1.23 >> INFO Date: Mon Oct 11 01:03:01 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 Using:pds >>> INFO Init: - LDD Dictionary_Type is Mission >>> WARNING Init: - Config.Properties Namespace Id Not Found:qmrn >>> WARNING Header: - New steward has been specified:geo >>> WARNING Header: - New namespace id has been specified:qmrn -- LDDTool Execution Summary -- 3 warning(s) 0 error(s) 0 fatal error(s) Input: - IM Version: 1H00 - PDS4 Flag: true - LDD Flag: true - Ingest LDD(s): im240lddtoolinput.xml Output: - ./PDS4_QMRN_1H00_1BCD.xsd - ./PDS4_QMRN_1H00_1BCD.sch - ./PDS4_QMRN_1H00_1BCD.xml >> INFO Exit(0)</pre> <p>Step 10: Note the PDS4 version number is 1H00, lddtool's default version</p> <pre>PDS4_QMRN_1H00_1BCD.csv PDS4_QMRN_1H00_1BCD.sch PDS4_QMRN_1H00_1BCD.txt PDS4_QMRN_1H00_1BCD.xml PDS4_QMRN_1H00_1BCD.xsd</pre>
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Test ID	IM.4
Issue ID	pds4-information-model#330
Issue Type	requirement

Issue Description	As a user I want to know the output of the tool after it completes execution.
Comments	Pass
Test Plan	Tested in IM.3

Test ID	IM.5
Issue ID	pds4-information-model#338
Issue Type	requirement
Issue Description	As a developer, I want to know the dLDD version from the output JSON data
Comments	Pass
Test Plan	Tested in IM.3

Test ID	IM.6
Issue ID	pds4-information-model#324 pds4-information-model#369 pds4-information-model#391
Issue Type	requirement
Issue Description	Inherit a class/attribute defined using DD_Associate_External_Class. Define permissible values for external namespaces in Ingest_LDD. Correctly inherit pds:Local Internal Reference & :Internal Reference
Comments	Pass
Test Plan	<ol style="list-style-type: none"> 1. lddtool -pl im324lddtoolinput.xml 2. diff im324a.xml im324b.xml 3. validate -x PDS4_PDS_1H00.xsd PDS4_TEST_1H00_1800.xsd -S PDS4_PDS_1H00.sch PDS4_TEST_1H00_1800.sch -t im324a.xml 4. validate -x PDS4_PDS_1H00.xsd PDS4_TEST_1H00_1800.xsd -S PDS4_PDS_1H00.sch PDS4_TEST_1H00_1800.sch -t im324b.xml 5. rm PDS4_PDS_TEST_1H00* <p>Results:</p> <p>Step 1:</p> <pre>>> INFO LDDTOOL Version: 13.2.0-SNAPSHOT >> INFO IM Version Id: 1.17.0.0 >> INFO IM Namespace Id: pds >> INFO IM Label Version Id: 1.23 >> INFO Date: Wed Oct 13 23:53:53 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 Discipline >>> 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 -- 3 warning(s) 0 error(s) 0 fatal error(s) Input: - IM Version: 1H00 - PDS4 Flag: true</pre>

	<pre> - LDD Flag: true - Ingest LDD(s): im324lddtoolinput.xml Output: - ./PDS4_TEST_1H00_1800.xsd - ./PDS4_TEST_1H00_1800.sch - ./PDS4_TEST_1H00_1800.xml >> INFO Exit(0) Step 2: For pds4-information-model#330, note list of output files 61c61 < <reference_type>geometry_to_body</reference_type> --- > <!--reference_type>geometry_to_body</reference_type--> <!--absence previously passed though PDS4_PDS*.xsd requires it--> <!--IM-324--> 65c65 < <reference_type>another good value</reference_type> --- > <reference_type>badValue</reference_type> <!--IM-369--> Step 3: standard good message Step 4: the WARNING comes from a poor schematron test Configuration: Version 2.2.0-SNAPSHOT Date 2021-10-14T06:56:31Z Parameters: Targets [file:/Users/rchen/Desktop/im/im324b.xml] User Specified Schemas [file:/Users/rchen/Desktop/im/PDS4_PDS_1H00.xsd, file:/Users/rchen/Desktop/im/PDS4_TEST_1H00_1800.xsd] User Specified Schematrons [file:/Users/rchen/Desktop/im/PDS4_PDS_1H00.sch, file:/Users/rchen/Desktop/im/PDS4_TEST_1H00_1800.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/im/im324b.xml ERROR [error.label.schema] line 59, 37: cvc-complex-type.2.4.b: The content of element 'Internal_Reference' is not complete. One of '{"http://pds.nasa.gov/pds4/pds/v1":reference_type}' is expected. WARNING [warning.label.schematron] line 59, 37: The value is_airborne for attribute Internal_Reference.reference_type is deprecated and should not be used. ERROR [error.label.schematron] line 65, 37: The attribute test:Body_Identification_Base/pds:Internal_Reference/pds:reference_type must be equal to one of the following values 'geometry_to_body', 'another good value'. 1 product validation(s) completed Summary: 2 error(s) 1 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 1 error.label.schema 1 warning.label.schematron End of Report Completed execution in 3051 ms </pre>
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Test ID	IM.7
Issue ID	pds4-information-model#369

Issue Type	enhancement
Issue Description	Evolution of CCB-256: Need method for providing permissible value definitions for external namespaces in Ingest_LDD.
Comments	Pass
Test Plan	Tested in IM.6

Test ID	IM.8
Issue ID	pds4-information-model#391
Issue Type	defect
Issue Description	Issue with DD_Associate_External_Class when trying to reference pds:Internal_Reference and pds:Local_Internal_Reference
Comments	Pass
Test Plan	Tested in IM.6

Test ID	IM.9
Issue ID	pds4-information-model#397
Issue Type	defect
Issue Description	Different formatting of JSON output between 1F00 and current version
Comments	Pass
Test Plan	<pre> 1. lddtool -pl im397lddtoolinput.xml 2. grep _Internal_Reference im397oldoutput.JSON 3. grep _Internal_Reference PDS4_SPECLIB_1H00_1100.JSON Results: Step 1: >>> INFO LDDTOOL Version: 13.2.0-SNAPSHOT >>> INFO IM Version Id: 1.17.0.0 >>> INFO IM Namespace Id: pds >>> INFO IM Label Version Id: 1.23 >>> INFO Date: Mon Oct 18 01:53:23 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:speclib >>>> INFO Init: - Config.Properties Namespace Id Using:speclib >>>> INFO Init: - LDD Dictionary_Type is Discipline >>>> INFO Attribute: <measurement_atmosphere_composition> - A 'nillable' attribute was found that is not a required attribute in at least one class. [snip] >>>> INFO Attribute: <volatile_type> - The default maximum characters provided by the attribute's data type is being overridden with 255 >>>> WARNING Header: - New steward has been specified:geo >>>> WARNING Header: - New namespace id has been specified:speclib -- LDDTool Execution Summary -- 2 warning(s) 0 error(s) 0 fatal error(s) Input: - IM Version: 1H00 - PDS4 Flag: true - LDD Flag: true - Export JSON Flag: true - Ingest LDD(s): im397lddtoolinput.xml Output: - ./PDS4_SPECLIB_1H00_1100.xsd - ./PDS4_SPECLIB_1H00_1100.sch - ./PDS4_SPECLIB_1H00_1100.xml </pre>

	<pre> - ./PDS4_SPECLIB_1H00_1100.JSON >> INFO Exit(0) Step 2: the old bad lddtool hacked references to external namespaces by creating identifiers with its own prepended namespace, in this case "speclib" "identifier": "0001_NASA_PDS_1.speclib.Ancillary_Product.speclib.Ancillary_Product_Internal_Reference" , "title": "Ancillary_Product_Internal_Reference" , "title": "Ancillary_Product_Internal_Reference" , "identifier": "0001_NASA_PDS_1.speclib.Measurement_Instrument.speclib.Measurement_Instrument_Internal_Reference" , "title": "Measurement_Instrument_Internal_Reference" , "title": "Measurement_Instrument_Internal_Reference" , Step 3: nothing matches because the hack is gone </pre>
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Test ID	IM.10
Issue ID	pds4-information-model#403
Issue Type	defect
Issue Description	CCB-329 - Broaden Definition of Attribute aperture
Comments	Pass.
Test Steps	<p>The definition changed from 1G00's:</p> <p style="padding-left: 40px;">The aperture attribute provides the diameter of an opening, usually circular, that limits the quantity of light that can enter an optical instrument.</p> <p>to 1H00's:</p> <p style="padding-left: 40px;">The aperture attribute provides a measure of the effective collecting area of the telescope – its diameter (if single and circular) or its equivalent diameter (if non-circular and/or an array). For purposes of this definition, aperture efficiency is assumed to be 100 percent.</p> <p>This should satisfy the issue's request to redefine aperture to allow for non-circular and radio and array telescopes</p>

4 Miscellaneous

4.1 Test Data

https://pds-engineering.jpl.nasa.gov/content/build_12.0_deliverables has this document as well as test data PDS4test.build12.0.tgz.

4.2 Test Environment

Build 12.0 integration and test environment encompasses the following:

Host	OS	RAM	Software
RC's laptop	macOS 10.14.6	32G B	validate, im
John's laptop	macOS 10.14.6	32G B	Validate
GC's laptop	macOS 11.2.3	16 GB	Harvest, pds-deep-archive, pds-doi-api, pds-api, doi-service, pds-doi-ui, pds-registry-app, pds-registry-mgr-elastic, pds-wds-web, PDS.nasa.gov-Search, PDS.nasa.gov-UX, registry-api-service
John's pc	Windows 10 Pro	8 GB	Validate

4.3 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.

4.4 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