

CHANGE LOG

| Revision | Submission Date | Affected Sections or Pages | Change Summary |
|----------|-----------------|----------------------------|----------------------------|
| Initial | 9/25/2023 | All | Initial issue of document. |

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1 INTRODUCTION

1.1 IDENTIFICATION

| Property | Value |
|-----------------------|-------|
| Configuration ID (CI) | |
| Element | PDS |
| Program Set | |
| Version | B14.0 |

1.2 PURPOSE

This Test Plan defines specific tests Integration and Testing Team will perform to verify and validate that the PDS4 system deployed for Build 14.0. Section 5 of this document lists each test and a summary of how each test is going to be performed. A traceability matrix in section 6 and section 7 traces these tests to the new PDS4 system design requirements, enhancements and defects.

1.3 OVERVIEW

See [B14.0 RDD](#).

1.4 TERMINOLOGY AND NOTATION

N/A

1.5 REFERENCES

See [B14.0 RDD](#).

Table 1: Applicable JPL Rules Documents

| Title | DocID |
|---|-------|
| <i>Software Development</i> | 57653 |
| <i>Overview of Software Development Processes</i> | 78187 |

Table 2: Applicable MGSS Documents

| Title | Document Number |
|--|-----------------|
| <i>MGSS Implementation and Maintenance Task Requirements</i> | DOC-001455 |

2 DEPENDENCIES AND ENVIRONMENTS

2.1 SOFTWARE DEPENDENCIES AND ASSUMPTIONS

Included in this release are the following packages.

Table 3: Software Packages

| Product | Version |
|---|-----------|
| Java Runtime Environment (JRE) | 11.0.16.1 |
| Various Java dependency libraries used by testable products (e.g., JASON, etc.) | varies |
| Python | 3.9.7 |
| Various Python modules used for test setup/analysis (e.g., Pandas, etc.) | varies |

2.2 TEST ENVIRONMENT

Build 14.0 integration and test environment encompasses the following:

| Host | OS | RAM | Software |
|------------------|--------------------------------|-------|--|
| Miguel's laptop | Mac OS X 13.5.2 | 32 GB | Validate, Pds4-Information-Model |
| GC's laptop | Mac OS Ventura 13.6 | 16 GB | Deep-archive, PDS-API, Registry, Registry-API, Registry-Mgr, Doi Service, Harvest, Nucleus, pds4-jparser, portal-tasks |
| pds-int | Oracle Linux Server 8.7 | 16 GB | Registry. Open-Search |
| Docker Container | Debian GNU/Linux 11 (bullseye) | | PDS-API, Registry, Registry-API, Registry-Mgr |

3 TEST POLICY

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 14.0 Integration testing is the execution and management of tests by the Engineering Node to ensure that the release of Build 14.0 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.

4 TEST TOOLS

Table 4: Test Tools

| Tool | Version |
|----------------|---------|
| Docker Desktop | 4.12.0 |
| Curl | 7.79.1 |
| Postman | 10.18.6 |

5 TEST PROCEDURES

Table 5 identifies all the test procedures that verify the implementation of requirements, improvements, features, and so on, as well as the correction of defects and the time to perform each test. The total estimated time to execute the test procedures is x hours. [Release Build 14.0 Test Procedure](#) identifies the complete specification of the test procedures.

Table 5: Summary of Test Procedures

| Test Procedure ID | Test Procedure Summary Statement | Time to Perform Test |
|---|--|----------------------|
| IM.1 pds4-information-mode I#658 Bug trying to generate LDD and missing files | Run Iddtool and verify files are generated without missing file errors | 0.5 hour |
| IM.2 pds4-information-mode I#661 LDDTool fails for dependent LDDs since v14.2.0 | Run Iddtool and verify files are generated without errors when running it dependent LDDs | 0.5 hour |
| IM.3 pds4-information-mode I#667 Iddtool does not generate the correct closing tag for rule_type = Report | Run Iddtool and verify that generated schematron has correct opening and closing tags | 0.5 hour |
| IM.4 pds4-information-mode I#679 CCB-336 | Add a License_Information class to the Identification_Area | 0.5 hour |
| IM.5 pds4-information-mode I#670 | Adds to default output JSON TermMap | 0.5 hour |

| Test Procedure ID | Test Procedure Summary Statement | Time to Perform Test |
|---|--|----------------------|
| IM.6 pds4-information-mode I#686 | Verify LDDTool Processing of the Discipline LDDs matches outputs previous releases | 0.5 hour |
| VAL.1 validate#190 Validation fails to catch real value in ASCII_NonNegative_Integer field (Table_Delimited) | Run validate with test data. It should fail with Value does not match its data type 'ASCII_NonNegative_Integer' | 0.5 hour |
| VAL.2 validate#431 warning.table.characters_between_fields missing for last record in table | Run validate with --strict-field-checks on data with alphanumeric characters between fields in Table_Character. We should expect WARNING [warning.table.characters_between_fields] | 0.5 hour |
| VAL.3 validate#561 Validate incorrectly enforces file naming requirements on bundles/collections | Run validate with test data and then again with name change to include 'collection' in file name to see if file naming conventions are incorrectly being enforced. | 0.5 hour |
| VAL.4 validate#652 validate 3.3.0 snapshot produces incorrect SKIP/INFO messages | Run validate with test data. Should not see SKIP/INFO messages. | 0.5 hour |
| VAL.5 validate#631 Expected value in validate report for context reference name is not same as value in the context file | When running validate, make sure you're not getting [info.label.context_ref_case_mismatch] if there is a case mismatch. Validate should be case agnostic | 0.5 hour |
| VAL.6 validate#644 Validate gives errors for 'NaN' and 'Inf' values in IEEE754 data | Run validate with test data. Should not see NaN or Inf errors. | 0.5 hour |
| VAL.7 | Run validate and verify we don't see errors for .arch_h file types | 0.5 hour |

| Test Procedure ID | Test Procedure Summary Statement | Time to Perform Test |
|---|---|----------------------|
| validate#500 Validate does not allow .arch_h file name/data type | | |
| VAL.8 validate#649 validate does not validate a collection if collection.xml pointed to | Run validate on a collection and make sure we don't see 'No products found' | 0.5 hour |
| VAL.9 validate#479 validate erroneously flags PDF/A-1a compliant file | Run validate on test data and verify we do not get [error.pdf.file.not_pdfa_compliant] | 0.5 hour |
| VAL.10 validate#673 Validate does not handle Special_Constants valid_minimum and valid_maximum in accordance with information mode | Run validate and verify that it does not give an error for values that are beyond the valid_minimum and valid_maximum | 0.5 hour |
| VAL.11 validate#674 validate does not handle special constants with data type of SignedLSB2 | Run Validate against a pds4 label with special constants for a product with a SignedLSB2 data type and verify it does not give a FATAL_ERROR | 0.5 hour |
| VAL.12 validate#679 Validate throws internal error when coming across non-label XML in a target directory | Run Validate and verify that it throws a warning and not stack trace errors when the XML file is not a PDS4 label. | 0.5 hour |
| VAL.13 validate#684 Validation failures are contingent on presence of <file_size> attribute in <File> class | Run Validate and verify that it does not throw a ERROR [error.label.invalid_object_definition] when a file_size attribute is included in a <File> class | 0.5 hour |
| VAL.14 | Run validate with test data. Make sure that the number of records/fields specified in label matches the records in the actual data table | 0.5 hour |

| Test Procedure ID | Test Procedure Summary Statement | Time to Perform Test |
|---|--|----------------------|
| validate#217 As a user, I want to validate content for all possible PDS4 table types | | |
| VAL.15 validate#343 As a user I want to see the name of a table/array in errors, if one is specified | Run Validate and verify that you see the name of the failing table/array displayed in the output | 0.5 hour |
| VAL.16 validate#462 As a user, I want validate to throw an error when a collection inventory contains an invalid secondary product reference | Run Validate and verify that you see an error for invalid LIDs specified for secondary context in a collection inventory | 0.5 hour |
| VAL.17 validate#476 As a user, I want to check that are no duplicate LIDs/LIDVIDs in a File_Area_Inventory | Run Validate and verify that you see error.inventory.duplicate | 0.5 hour |
| VAL.18 validate#599 As a user, I want to be able to use both online and local schema/schematron files. | Run Validate and verify that when options -S or -x are used, it first checks the files specified by the -x or -S options for schema/schematron files, and then checks the online posted copies, and then if nothing is found, it should report errors. | 0.5 hour |
| VAL.19 validate#617 As a user, I would like to enforce browse file extension with encoding type | Run Validate and verify you get [error.validation.file_naming_problem] | 0.5 hour |
| VAL.20 validate#628 As a user, I want to throw a WARNING when a product's schematron | Run validate and verify you get [warning.label.schema] | 0.5 hour |

| Test Procedure ID | Test Procedure Summary Statement | Time to Perform Test |
|---|--|----------------------|
| version does not match the schema version | | |
| VAL.21 validate#604 As a user, I want to validate MP4/H.264 encoded video as observational data | Run validate and verify you get [error.file.not_mp4_m4a_compliant] | 0.5 hour |
| VAL.22 validate#605 As a user, I want to validate MP4/H.264/AAC encoded video with audio as observational data | Run Validate and verify that it throws an error for invalid MP4/H.264/AAC encoded audio products | 0.5 hour |
| VAL.23 validate#662 As a user, I want to validate WAV encoded audio as observational data | Run Validate and verify that it throws an error for invalid WAV encoded audio products | 0.5 hour |
| VAL.24 validate#663 As a user, I want to validate M4A/AAC encoded audio as observational data | Run Validate and verify that it throws an error for invalid M4A/AAC encoded audio products | 0.5 hour |
| VAL.25 validate#651 As a user, I want to support bit patterns within Special_Constants values | Run Validate successfully with bit patterns within Special_Constants | 0.5 hour |
| VAL.26 validate#658 As a user, I want the PDF error reports to be output in a user-specified directory | Run Validate and verify that when using -pdf-errors flag, it outputs the PDF error report at the specified directory | 0.5 hour |
| VAL.27 validate#535 As a user, I want to receive a warning if records in | Run Validate and verify that it gives a warning when the number of records are greater than the records value specified in label | 0.5 hour |

| Test Procedure ID | Test Procedure Summary Statement | Time to Perform Test |
|---|--|----------------------|
| file are greater than records value specified in label | | |
| VAL.28 validate#683 As a user, I want to receive a WARNING when table objects are out of order | Run Validate and verify that we receive and warning when table objects are out of order | 0.5 hour |
| VAL.29 validate#7 Update to support ComplexLSB8 data types and investigate Floating point exception | Run Validate and verify we don't see ComplexLSB8 errors | 0.5 hour |
| VAL.30 validate#680 validate does not correctly diagnose errors in the record_length value for fixed width Table_Character objects | Run Validate and verify that it throws an error when record_length value for fixed width Table_Character object is incorrect | 0.5 hour |
| VAL.31 validate#608 Update datetime regex for content validation | Run Validate and verify that datetime validation for table data works with new regex patterns | 0.5 hour |
| VAL.32 validate#643 Document how to use validate-refs tool in Validate Operation User Guide | Verify documentation has User Guide on how to use validate-refs | 0.5 hour |
| VAL.33 | Upgrade verapdf dependency per transitive log4j vulnerability | 0.5 hour |
| VAL.34 | validate#690 Validate does not accurately check for missing_constant values | 0.5 hour |
| DO.01 devops#34 jenkins continuous deployment does not pull docker images | Verify the latest images are pulled every night. on jenkins | 0.5 hour |

| Test Procedure ID | Test Procedure Summary Statement | Time to Perform Test |
|---|--|----------------------|
| DO.02 devops#50 As a user, I want PDS EN produced Docker images to support multiple platforms (x86 and ARM) | Verify Docker image runs on M1 processor. | 0.5 hour |
| DO.03 devops#35 As a EN team member, I want to check the API test reports in testrail | Verify API test reports are available in Testrail. | 0.5 hour |
| DOI.01 doi-service#408 Sync script is pushing non-findable DOIs to ADS | Verify FindableDOI are included in the report after running the sftp_drop_weekly_roundup.py script | 1 hour |
| HAR.01 harvest#124 Access forbidden during nominal pipeline execution of harvest on Mars2020 archive | Verify this is not a bug by verifying developer's findings on resource usage at the moment. | 0.5 hour |
| HAR.02 harvest#119 As a developer, I want to know what version of Harvest was used to load a product | verify the Harvest version returned in the ops:Harvest_Info/ops:software_version value. | 0.5 hour |
| PA.01 pds-api#260 PDS API documents are unclear wrt quoting in queries | Check Samples in API document, make sure examples are meaningful. | 1 hour |
| PA.02 pds-api#259 API search returns 500 for anything besides simple queries | verify the endpoint returns 400 instead of 500 when using the problem query | 1 hour |

| Test Procedure ID | Test Procedure Summary Statement | Time to Perform Test |
|---|---|----------------------|
| PA.03 pds-api#262 PDS API is not respecting the sort field | The sort parameter is not implemented in the registry-api service. Verify that it is stated clearly in the documentation. | 0.5 hour |
| RA.01 registry-api#296 API crashes with JVM memory error on data sets with very large labels (>1MB) | Verify docker-image has increased processing memory allocation. | 1 hour |
| RA.02 registry-api#277 Product summary object has an incomplete "properties" set | verify new endpoint /product-properties is implemented in docker-image or in pds-gamma | 0.5 hour |
| RA.03 registry-api#305 API not returning value for NAIF bundles | Verify the endpoints return data for NAIF bundles | 0.5 hour |
| RA.04 registry-api#356 Accept:* response not defaulting to valid application/json | Verify endpoint returns prettyfied json | 0.5 hour |
| RA.05 registry-api#262 the request url in the error message does not make sense | validate the error message has the right path that was requested and includes other query parameters. | 0.5 hour |
| RA.06 registry-api#341 members of a bundle does not work on new test dataset | Confirm that correct image was used by checking docker events --since 180m grep loader yields expected entry showing zero-code exit of container with the intended registry image | 1 hour |
| RA.07 | Verify registry-api response to the request with json+pds4 format. | 1 hour |

| Test Procedure ID | Test Procedure Summary Statement | Time to Perform Test |
|--|---|----------------------|
| registry-api#349 Request for json+pds4 response fails in production | | |
| RA.08 registry-api#355 api does not return information that OpenSearch says is public | Verify registry-api returns product information for urn:nasa:pds:dart_teleobs/products? | 1 hour |
| RA.09 registry-api#362 field case in response and query have mismatched cases | Verify response to return the exact case used in the PDS4 label | 0.5 hour |
| RA.10 registry-api#343 API falsely reports 10000 hits for hits>10000 | Verify the hits return the correct number for hits > 10000 | 0.5 hour |
| RA.11 registry-api#336 As a PDS operator, I want to know the health of the registry API service | Verify the /healthcheck endpoint has been implemented. | 0.5 hour |
| RA.12 registry-api#361 As a user, I want my API request to execute successfully even when the registry contains corrupted documents | Verify the return hits include the bad document. | 1 hour |
| REG.01 registry#226 As a system, I can support up to 25 simultaneous writes from Harvest | Verify that Harvest can support up to 25 simultaneous writes. | 1 hour |

| Test Procedure ID | Test Procedure Summary Statement | Time to Perform Test |
|--|---|----------------------|
| REG.02 registry#168 As a manager, I want to see the progress of data sets ingested into registry vs. legacy registry | Verify the manager account can find a dashboard showing the progress of ingestion in the registry | 1 hour |
| RHL.01 registry-harvest-legacy #7 Upgrade legacy harvest with upgraded log4j libraries and Solr 8.11.2 | Verify harvest has upgraded log4j libraries and Solr 8.11.2 | 1 hour |
| RL.01 registry-loader#26 Stable Roundup can no longer trigger Imaging workflow | Verify that Docker images are constructed and pushed to the Hub when pushing a tag like release/x.y.z | 1 hour |
| RML.01 registry-mgr-legacy#5 Fix XSLT issues with displaying search results | Verify When tried to view some data using the wt=xslt, it would have the appropriate link/descriptions matching the production keyword search | 1 hour |
| RML.02 registry-mgr-legacy#3 Upgrade legacy registry mgr with upgraded log4j libraries and Solr 8.11.2 | Verify legacy registry mgr has upgraded log4j libraries and Solr 8.11.2 | 1hour |
| RPC.01 registry-pds3-catalog#2 Catalog does not create field 'package_id' | Verify each doc to have a package_id so that registry-mgr is able to index PDS3 data (similar to what harvest does for PDS4 data) | 1 hour |
| RS.01 registry-sweepers#34 Provenance bulk update db writes fail | Verify that we don't receive the erroneously-constructed path error. The registry,someRemote:registry,someOtherRem | 1 hour |

| Test Procedure ID | Test Procedure Summary Statement | Time to Perform Test |
|---|--|----------------------|
| under specific conditions related to presence of CCRs | ote:registry chunk is being interpreted as a index-name literal and failing. | |
| SAN.01 search-api-notebook#20 Data layer separation for pyWWT visualization | Verify that each lid is a separate data layer in the widget. | 1 hour |
| SAN.02 search-api-notebook#26 As a user, I want to retrieve and view IR/UV/Visual wavelength images | Verify that a notebook is available to visualize thumbnails of PDS4 IMG files. | 1 hour |
| POR.01 portal-tasks#80 Unexpected metadata causing bug in ds-view | Verify https://pds.nasa.gov/ds-view/pds/viewCollection.jsp?identifier=urn%3Anasa%3Aapds%3Aorex.ovirs%3Acalibration&version=5.0 display normally. | 0.5 hour |
| POR.02 portal-tasks#84 Fix coldfusion vulnerability identified by ITSD | Verify ColdFusion has been patched and this has been fixed | 0.5 hour |

6 TRACEABILITY MATRICES

Table 6 identifies the implemented requirements, improvements, features and so on, including references to the test procedures that verify them.

Table 6: Requirement, Improvement, and Feature Traceability Matrix

| ID | Requirement, Improvement, or Feature Statement | Verification Procedure ID |
|-------------------|---|---------------------------|
| devops#50 | As a user, I want PDS EN produced Docker images to support multiple platforms (x86 and ARM) | DO.02 |
| devops#35 | As a EN team member, I want to check the API test reports in testrail | DO.03 |
| harvest#119 | As a developer, I want to know what version of Harvest was used to load a product | HAR.02 |
| registry-api #336 | As a PDS operator, I want to know the health of the registry API service | RA.11 |

| ID | Requirement, Improvement, or Feature Statement | Verification Procedure ID |
|-----------------------------|--|---------------------------|
| registry-api #361 | As a user, I want my API request to execute successfully even when the registry contains corrupted documents | RA.12 |
| pds4-information-model #679 | CCB-336 Add a License_Information class to the Identification_Area | IM.4 |
| pds4-information-model #670 | Adds to default output JSON TermMap | IM.5 |
| pds4-information-model #686 | Verify LDDTool Processing of the Discipline LDDs matches outputs previous releases | IM.6 |
| validate#217 | As a user, I want to validate content for all possible PDS4 table types | VAL.14 |
| validate#343 | As a user I want to see the name of a table/array in errors, if one is specified | VAL.15 |
| validate#462 | As a user, I want validate to throw an error when a collection inventory contains an invalid secondary product reference | VAL.16 |
| validate#476 | As a user, I want to check that are no duplicate LIDs/LIDVIDs in a File_Area_Inventory | VAL.17 |
| validate#599 | As a user, I want to be able to use both online and local schema/schematron files. | VAL.18 |
| validate#617 | As a user, I would like to enforce browse file extension with encoding type | VAL.19 |
| validate#628 | As a user, I want to throw a WARNING when a product's schematron version does not match the schema version | VAL.20 |
| validate#604 | As a user, I want to validate MP4/H.264 encoded video as observational data | VAL.21 |
| validate#605 | As a user, I want to validate MP4/H.264/AAC encoded video with audio as observational data | VAL.22 |
| validate#662 | As a user, I want to validate WAV encoded audio as observational data | VAL.23 |
| validate#663 | As a user, I want to validate M4A/AAC encoded audio as observational data | VAL.24 |
| validate#651 | As a user, I want to support bit patterns within Special_Constants values | VAL.25 |
| validate#658 | As a user, I want the PDF error reports to be output in a user-specified directory | VAL.26 |
| validate#535 | As a user, I want to receive a warning if records in file are greater than records value specified in label | VAL.27 |

| ID | Requirement, Improvement, or Feature Statement | Verification Procedure ID |
|---------------------------|--|---------------------------|
| validate#683 | As a user, I want to receive a WARNING when table objects are out of order | VAL.28 |
| validate#7 | Update to support ComplexLSB8 data types and investigate Floating point exception | VAL.29 |
| validate#680 | Validate does not correctly diagnose errors in the record_length value for fixed width Table_Character objects | VAL.30 |
| validate#608 | Update datetime regex for content validation | VAL.31 |
| validate#643 | Document how to use validate-refs tool in Validate Operation User Guide | VAL.32 |
| registry#226 | As a system, I can support up to 25 simultaneous writes from Harvest | REG.01 |
| registry#168 | As a manager, I want to see the progress of data sets ingested into registry vs. legacy registry | REG.02 |
| registry-harvest-legacy#7 | Upgrade legacy harvest with upgraded log4j libraries and Solr 8.11.2 | RHL.01 |
| registry-mgr-legacy#3 | Upgrade legacy registry mgr with upgraded log4j libraries and Solr 8.11.2 | RML.02 |
| search-api-notebook#20 | Data layer separation for pyWWT visualization | SAN.01 |
| search-api-notebook#26 | As a user, I want to retrieve and view IR/UV/Visual wavelength images | SAN.02 |

Table 7 identifies the corrected defects and the references to the test procedures that verify them.

Table 7: Defect Traceability Matrix

| ID | Summary Statement of Defect | Verification Procedure ID |
|-----------------|---|---------------------------|
| devops#34 | jenkins continuous deployment does not pull docker images | DO.01 |
| doi-service#408 | Sync script is pushing non-findable DOIs to ADS | DOI.01 |
| harvest#124 | Access forbidden during nominal pipeline execution of harvest on Mars2020 archive | HAR.01 |
| pds-api#260 | PDS API documents are unclear wrt quoting in queries | PA.01 |
| pds-api#259 | API search returns 500 for anything besides simple queries | PA.02 |

| ID | Summary Statement of Defect | Verification Procedure ID |
|----------------------------|---|---------------------------|
| pds-api#262 | PDS API is not respecting the sort field | PA.03 |
| registry-api#296 | API crashes with JVM memory error on data sets with very large labels (>1MB) | RA.01 |
| registry-api#277 | Product summary object has an incomplete "properties" set | RA.02 |
| registry-api#305 | API not returning value for NAIF bundles | RA.03 |
| registry-api#356 | Accept:* response not defaulting to valid application/json | RA.04 |
| registry-api#262 | the request url in the error message does not make sense | RA.05 |
| registry-api#341 | members of a bundle does not work on new test dataset | RA.06 |
| registry-api#349 | Request for json+pds4 response fails in production | RA.07 |
| registry-api#355 | api does not return information that OpenSearch says is public | RA.08 |
| registry-api#362 | field case in response and query have mismatched cases | RA.09 |
| registry-api#343 | API falsely reports 10000 hits for hits>10000 | RA.10 |
| pds4-information-model#658 | Bug trying to generate LDD and missing files | IM.1 |
| pds4-information-model#661 | LDDTool fails for dependent LDDs since v14.2.0 | IM.2 |
| pds4-information-model#667 | Lddtool does not generate the correct closing tag for rule_type = Report | IM.3 |
| validate#190 | Validation fails to catch real value in ASCII_NonNegative_Integer field (Table_Delimited) | VAL.1 |
| validate#431 | warning.table.characters_between_fields missing for last record in table | VAL.2 |
| validate#561 | Validate incorrectly enforces file naming requirements on bundles/collections | VAL.3 |
| validate#652 | Validate 3.3.0 snapshot produces incorrect SKIP/INFO messages | VAL.4 |
| validate#631 | Expected value in validate report for context reference name is not same as value in the context file | VAL.5 |
| validate#644 | Validate gives errors for 'NaN' and 'Inf' values in IEEE754 data | VAL.6 |
| validate#500 | Validate does not allow .arch_h file name/data type | VAL.7 |
| validate#649 | Validate does not validate a collection if collection.xml pointed to | VAL.8 |
| validate#479 | Validate erroneously flags PDF/A-1a compliant file | VAL.9 |

| ID | Summary Statement of Defect | Verification Procedure ID |
|-------------------------|--|---------------------------|
| validate#673 | Validate does not handle Special_Constants valid_minimum and valid_maximum in accordance with information mode | VAL.10 |
| validate#674 | Validate does not handle special constants with data type of SignedLSB2 | VAL.11 |
| validate#679 | Validate throws internal error when coming across non-label XML in a target directory | VAL.12 |
| validate#684 | Validation failures are contingent on presence of <file_size> attribute in <File> class | VAL.13 |
| validate#693 | Upgrade verapdf dependency per transitive log4j vulnerability | VAL.33 |
| validate#690 | Validate does not accurately check for missing_constant values | VAL.34 |
| registry-loader#26 | Stable Roundup can no longer trigger Imaging workflow | RL.01 |
| registry-mgr-legacy #5 | Fix XSLT issues with displaying search results | RML.01 |
| registry-pds3-catalog#2 | Catalog does not create field 'package_id' | RPC.01 |
| registry-sweepers#34 | Provenance bulk update db writes fail under specific conditions related to presence of CCRs | RS.01 |
| portal-tasks#80 | Unexpected metadata causing bug in ds-view | POR.01 |
| portal-tasks#84 | Fix coldfusion vulnerability identified by ITSD | POR.02 |

7 TEST ENVIRONMENT AND PERSONNEL

Table 8: Availability of Personnel

| Person | Assignment(s) | Availability |
|--------------|---|---------------------------------------|
| Gary Chen | Data-upload-manage, Devops, Doi-service, Harvest, Pds-api, Registry-api | 18 hours/week |
| Miguel Pena | Validate, IM, regression tests | 20 hours/week |
| Total | | Enter total hours or days here |

8 TESTING CONSTRAINTS AND RISKS

These planned tests fully depend on Registry Docker fully functioning, including bringing up swagger web and loading test data from existing test folders.

- IF installation and configuration of external software packages goes poorly THEN testing of the registry will halt until solved WITH LIKELIHOOD OF 50%.
- IF software changes and fixes come in THEN those tests will need to be rerun WITH LIKELIHOOD of 90% and CONSEQUENCE OF resetting the number of days needed for testing.