

Build 7b Report

PDS MC F2F

Pasadena, California

April 19-20, 2017

Introduction

- Build 7b is the latest build and release of PDS4 which includes model, document and software.
- Integration and Test is in progress with completion planned for April 26, 2017.

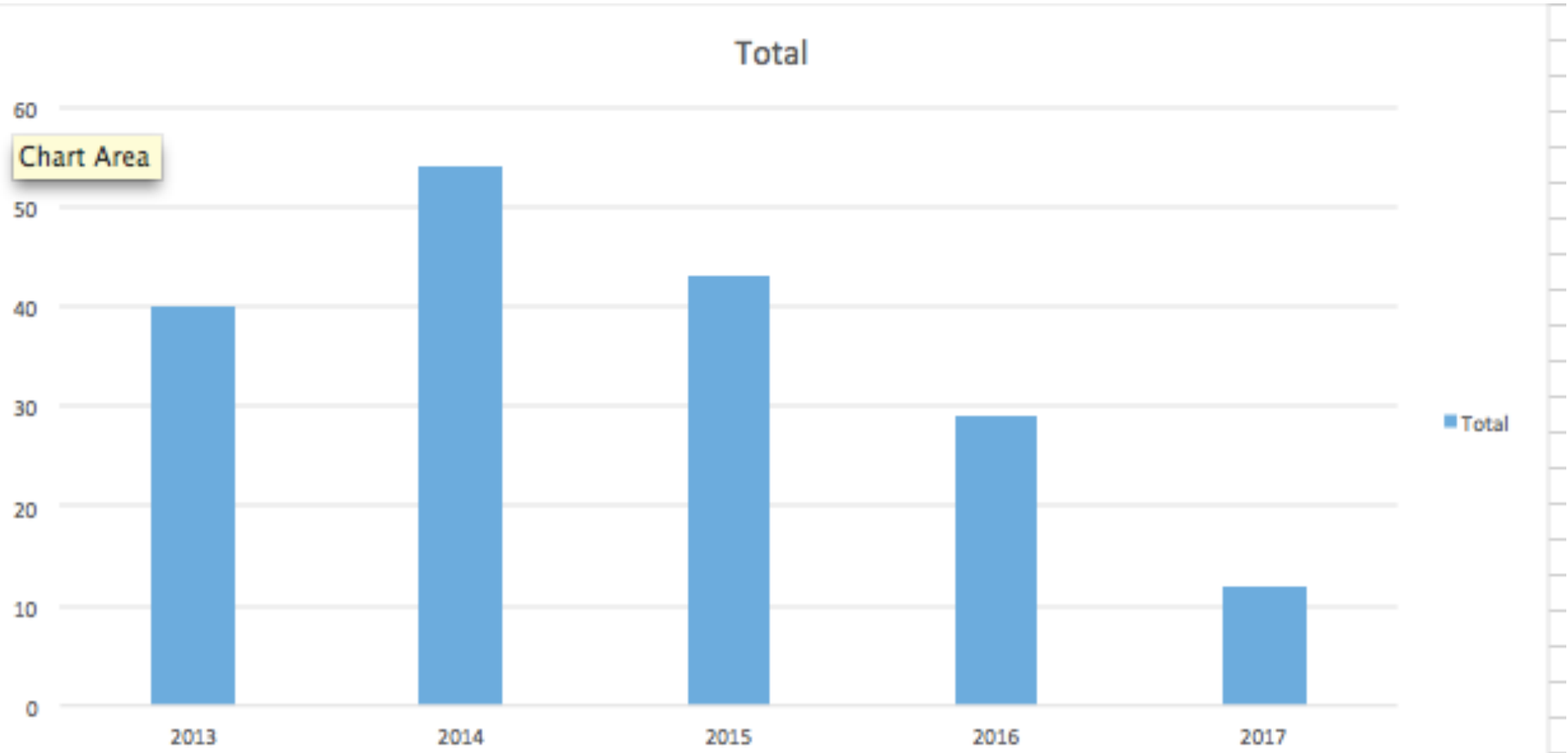
Build 7b I&T Summary

- Information Model 1.8.0.0 delivered to I&T on March 31, 2017.
- Software delivered to I&T on March 31, 2017.
- One new test case was added to Build 7b test plan (total of 51) to exercise new capabilities and services in addition to full system regression.
- System I&T (that integrates tools, services and IM artifacts) began on April 1, 2017.
- Standards Reference and DPH were updated and under review.
- Build 7b Deliverables web page is available on EN web site.

Information Model and Standards Components

- Information Model Specification (HTML)
- Release Notes
- Data Dictionary (HTML and PDF)
- XML Schema and Schematron

SCR metrics over time



Major Information Model Changes

- Addressed 5 issues impacting 3 PDS4 components.
- Core Dictionary
 - Made the ASCII numeric data types boundaries more precise, e.g., min and max values for ASCII integers
- Operations Dictionary
 - NSSDCA/PDS4 interface - Product_SIP_Deep_Archive
 - Added standards values for provider site ids
 - Added standard value for checksum type
 - Made internal reference to the Bundle required.
 - Relocated type and subtype attributes in Property Maps.
- Other auto-generated files
 - Added class hierarchy information to the JSON file
- Significant progress on Discipline and Mission dictionaries
 - Geometry, Cartography, Node dictionaries, etc

PDS4 Information Model Discipline and Mission Dictionaries

PDS4 Information Model Discipline and Mission Dictionaries			
	Dictionary	Schema	Description
Discipline			
	Display	PDS4_DISP_1400	The Display dictionary.
	Imaging	PDS4_IMG_1300	The Cartography and Imaging Sciences dictionary.
	Rings	PDS4_RINGS_1100	The Ring-Moon Systems dictionary.
	Cartography	<i>PDS4_CART_1700</i>	The Cartography dictionary.
	Geometry	<i>PDS4_GEOM_1700_1401</i>	The Geometry Dictionary.
	Spectra	<i>PDS4_SP_1800</i>	The Spectra dictionary.
	Particle	<i>PDS4_PARTICLE_1000</i>	The Particle dictionary.
	Wave	<i>PDS4_WAVE_1000</i>	The Wave dictionary.
	Alternate	<i>PDS4_ALT_1000</i>	The Alternate dictionary.
Mission			
	InSight	PDS4_INSIGHT_0400	The InSight mission Dictionary.
	MAVEN	<i>PDS4_MVN_1011</i>	The MAVEN mission dictionary.
	LADEE	<i>LADEE_1100</i>	The LADEE mission dictionary.
	BOPPS	<i>BOPPS_1100</i>	The BOPPS mission dictionary.

Build 7b Software Components

Tools

- Ingest
 - Harvest Tool
 - Catalog Tool
- Preparation
 - Generate Tool
 - Transform Tool
 - Validate Tool
 - Core and PDS4 Tools Libraries

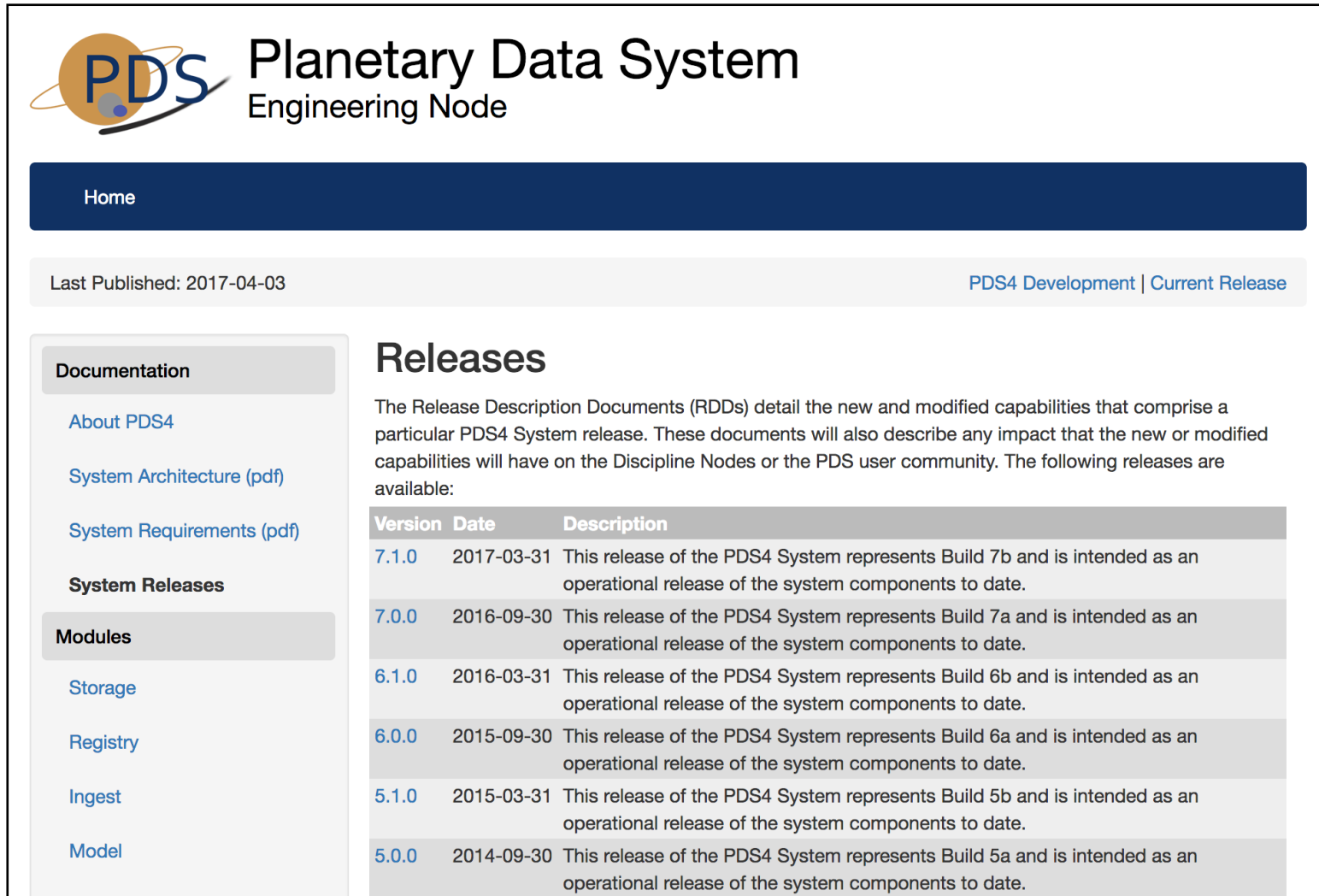
Services

- Registry and Search
 - Includes support for Tool and Data Dictionary content
- Transport
 - Backward compatible with the PDS-D Product Server
- Report
 - Generating monthly HQ reports

Major Software Changes

- Addressed 21 issues impacting 10 PDS4 components (registry, search, harvest, validate, core, transform, generate, transport, report)
 - Fully documented in the RDD (Release Description Document)
- Search Service
 - Changed approach to handling multiple search terms to improve search results and ranking
 - Added support for Product_Document in preparation for DOI support.
- Validate Tool
 - Full integration of validation library (originally developed by ARC) for enhanced validation (will talk more about that).
 - PDS3 validation support.
 - Several bundle/collection integrity checking features have been added.

Software Releases



The screenshot shows the Planetary Data System Engineering Node website. At the top left is the PDS logo, a stylized orange and blue planet with the letters 'PDS' in white. To its right is the text 'Planetary Data System Engineering Node'. Below the logo is a dark blue navigation bar with the word 'Home' in white. Underneath the navigation bar is a light gray bar containing the text 'Last Published: 2017-04-03' on the left and 'PDS4 Development | Current Release' on the right. The main content area is divided into a left sidebar and a main section. The sidebar has a 'Documentation' section with links for 'About PDS4', 'System Architecture (pdf)', and 'System Requirements (pdf)'. Below that is a 'System Releases' section, followed by a 'Modules' section with links for 'Storage', 'Registry', 'Ingest', and 'Model'. The main section is titled 'Releases' and contains a paragraph of text followed by a table of releases.

Planetary Data System
Engineering Node

Home

Last Published: 2017-04-03 [PDS4 Development](#) | [Current Release](#)

Documentation

- [About PDS4](#)
- [System Architecture \(pdf\)](#)
- [System Requirements \(pdf\)](#)

System Releases

Modules

- [Storage](#)
- [Registry](#)
- [Ingest](#)
- [Model](#)

Releases

The Release Description Documents (RDDs) detail the new and modified capabilities that comprise a particular PDS4 System release. These documents will also describe any impact that the new or modified capabilities will have on the Discipline Nodes or the PDS user community. The following releases are available:

Version	Date	Description
7.1.0	2017-03-31	This release of the PDS4 System represents Build 7b and is intended as an operational release of the system components to date.
7.0.0	2016-09-30	This release of the PDS4 System represents Build 7a and is intended as an operational release of the system components to date.
6.1.0	2016-03-31	This release of the PDS4 System represents Build 6b and is intended as an operational release of the system components to date.
6.0.0	2015-09-30	This release of the PDS4 System represents Build 6a and is intended as an operational release of the system components to date.
5.1.0	2015-03-31	This release of the PDS4 System represents Build 5b and is intended as an operational release of the system components to date.
5.0.0	2014-09-30	This release of the PDS4 System represents Build 5a and is intended as an operational release of the system components to date.

Changes to Standards Reference and Documents

- Documents now part of build process
 - Document Authoring Team (DAT)
 - S.Slavney; R.Simpson & R.Joyner
 - Document Review Team (DRT)
 - S.McLaughlin; S.LaVoie; E.Guinness; T.King
- SR v1800 updated by DAT; reviewed by DRT; ready for release.
- DPH v1700 updated by DAT; under review by DRT.
- Concepts v1800 – no changes; ready for release.

Summary of Changes to SR v1800

SCR	
CCB-171	Revised definitions of ASCII_Integer, ASCII_NonNegative_Integer, and ASCII_Real.

ALL CHANGES were captured in Change Log and reviewed by Document Review Team

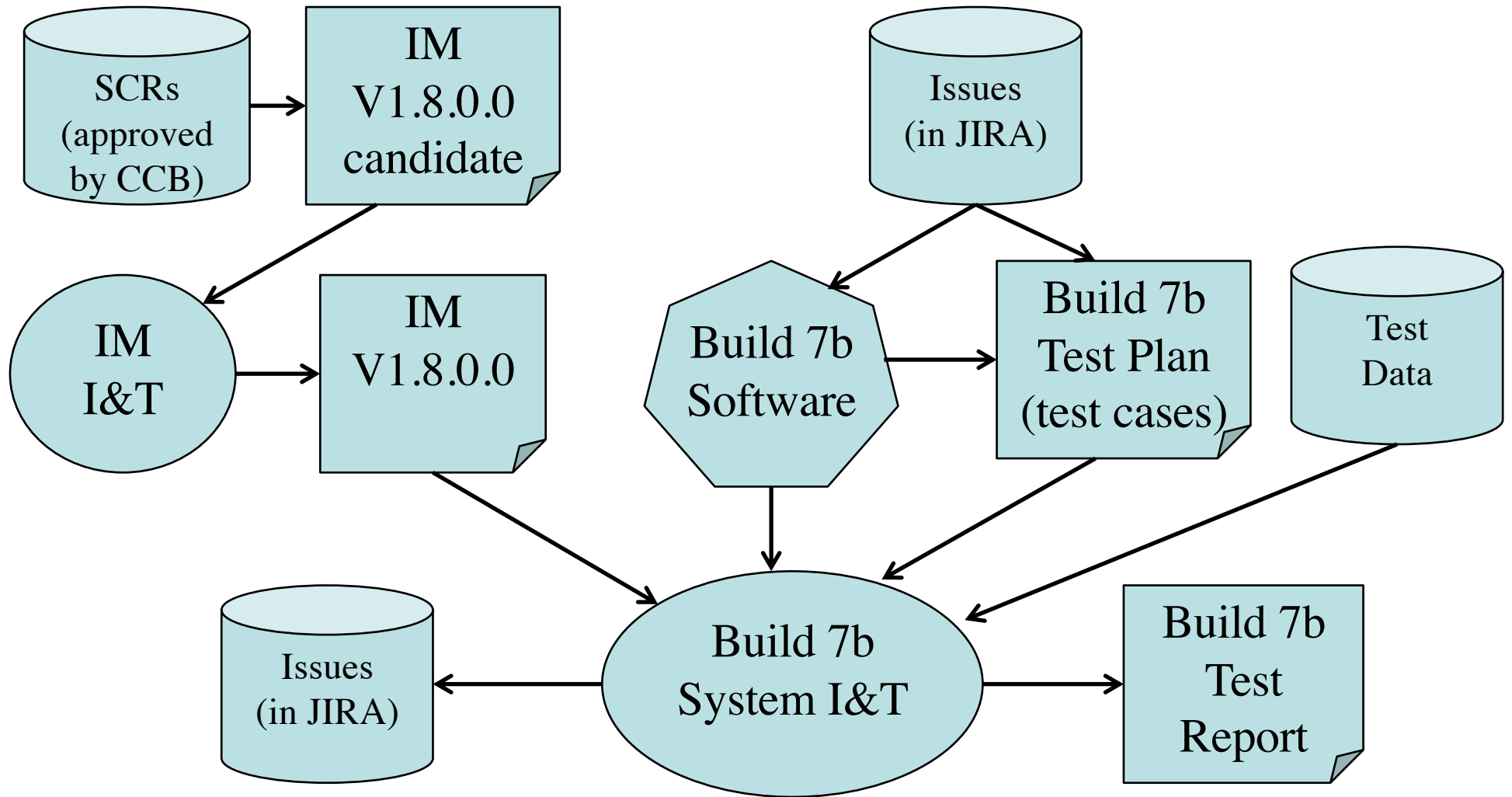
Summary of Changes to DPH v1700

SCR	
CCB-98	Choose most specific class available to describe an object.
CCB-146, CCB-160	Added “ros” and “jaxa” as valid agencies for context product LIDs.
n/a	Incorporated comments from Ed Guinness, Matt Tiscareno, Santa Martinez, Lev Nagdimunov, Dick Simpson, Ron Joyner, and Richard Chen.
n/a	<p>Completely reorganized sections in main text and appendices. Rewrote existing text and added sections. Moved detailed instructions to appendices. The goal has been to make the flow of information more logical in the order of presentation and in the level of detail for the non-expert reader.</p> <p>The Appendix on Creating and Using Local Data Dictionaries has not been rewritten. It needs special attention. Consider making it a separate document.</p>

I&T Approach

- System I&T is an iterative process.
- Test cases are derived from requirements.
- Regression testing is mandatory for each build.
- Test cases are used to exercise software and services with example data products delivered with each build.
- All issues found are recorded in the tracking system JIRA.
- Prior to completion of a system build, all show stopper issues must be corrected and the fix must be verified, follow by regression testing.
- Only when I&T is completed without major anomaly, then system can be deployed.
- Full details are captured in test report which identifies result of each test case, and their traceability to requirements.

Build 7b I&T Process



I&T Input/Output

- Input
 - IM V1.8.0.0 as a result of Node testing of candidate IM based on approved SCRs by CCB
 - Build 7b system software including upgrades and fixes of issues captured in JIRA
 - Build 7b test plan including new test cases of any new features and regression test cases
 - Build 7b test data
- Output
 - New issues found have been added to JIRA
 - Fixed issues were closed in JIRA
 - Test result has been documented (including requirement traceability matrix)

I&T Progress

- 1 new test case added.
- Total of 51 test cases are currently being exercised.
- 0 major issues found, no show stoppers.
- 2 minor issues and 1 suggested improvement created in JIRA.
 - Validate no longer supports model versions prior to 1.0.
 - Validate picks up hidden files.
 - Harvest and Validate do not handle leading slashes correctly in checksum manifest files. They also do case sensitive comparisons of checksums.

Deployment

- I&T is in progress with completion planned for April 26, 2017.
- Plan to deploy Build 7b at the EN by May 12, 2017.
- Begin scheduling Node Deployments as soon as possible

Questions/Comments

Software Issues Resolved in Build 7b

- New Capabilities
 - [\[PDS-477\]](#) - Registry: Update Registry Client to include extrinsic replace method
 - [\[PDS-494\]](#) - Search: Add support for Product_Document
- Modified Capabilities
 - [\[PDS-458\]](#) - Search: Restructure the search-service package to overlay the Solr WAR
 - [\[PDS-471\]](#) - Harvest: The tool needs to support collections with multiple collection product versions
 - [\[PDS-473\]](#) - Harvest: Improve resolution of relative file path references in a Checksum Manifest file
 - [\[PDS-475\]](#) - Search: Update PDS Imaging search tool descriptions
 - [\[PDS-479\]](#) - Harvest-PDAP: Update the service endpoints being called to conform to the new PSA
 - [\[PDS-480\]](#) - Harvest-PDAP: Update to allow the querying of data sets starting from public release date
 - [\[PDS-488\]](#) - Core: Disable support for xinclude pointers
 - [\[PDS-490\]](#) - Core: Add the Integrity Checking feature to the pds4.bundle and pds4.collection rules
 - [\[PDS-492\]](#) - Search: Improve the appearance of Archive Page products in search results
- Corrected Capabilities
 - [\[PDS-470\]](#) - Generate: tool removes elements with nil="true" instead of passing them through
 - [\[PDS-476\]](#) - Registry: Fix failing unit tests
 - [\[PDS-481\]](#) - Core: Restore URL support
 - [\[PDS-482\]](#) - Validate: Restore Integrity Checking Feature
 - [\[PDS-483\]](#) - Core/Validate: Restore File Reference checking
 - [\[PDS-484\]](#) - Core: Restore the ability to pass in a target directory to do file by file validation
 - [\[PDS-485\]](#) - Core: Restore reporting of files that passed validation
 - [\[PDS-486\]](#) - Core: Restore the capability to filter on specific files when passing in a target directory
 - [\[PDS-487\]](#) - Core: Restore capability to validate against a schema defined in the label
 - [\[PDS-489\]](#) - Search: Accessing a registry instance utilizing https fails in search-core