Testing and Deployment

PDS 2010 System Review
March 22-24, 2010

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Agenda

- Approach
- V & V Process
- Phased Builds
- Phases

Approach

- Deployment
  - align with incremental development and transition
  - increasing levels of capability will be put in place over time
- Testing
  - perform against requirements
  - test software under CM before deployment
  - automate wherever possible
  - Perform regression test over time
- Documentation
  - Deployment and Test Plans
  - Test reports, Release Descriptions

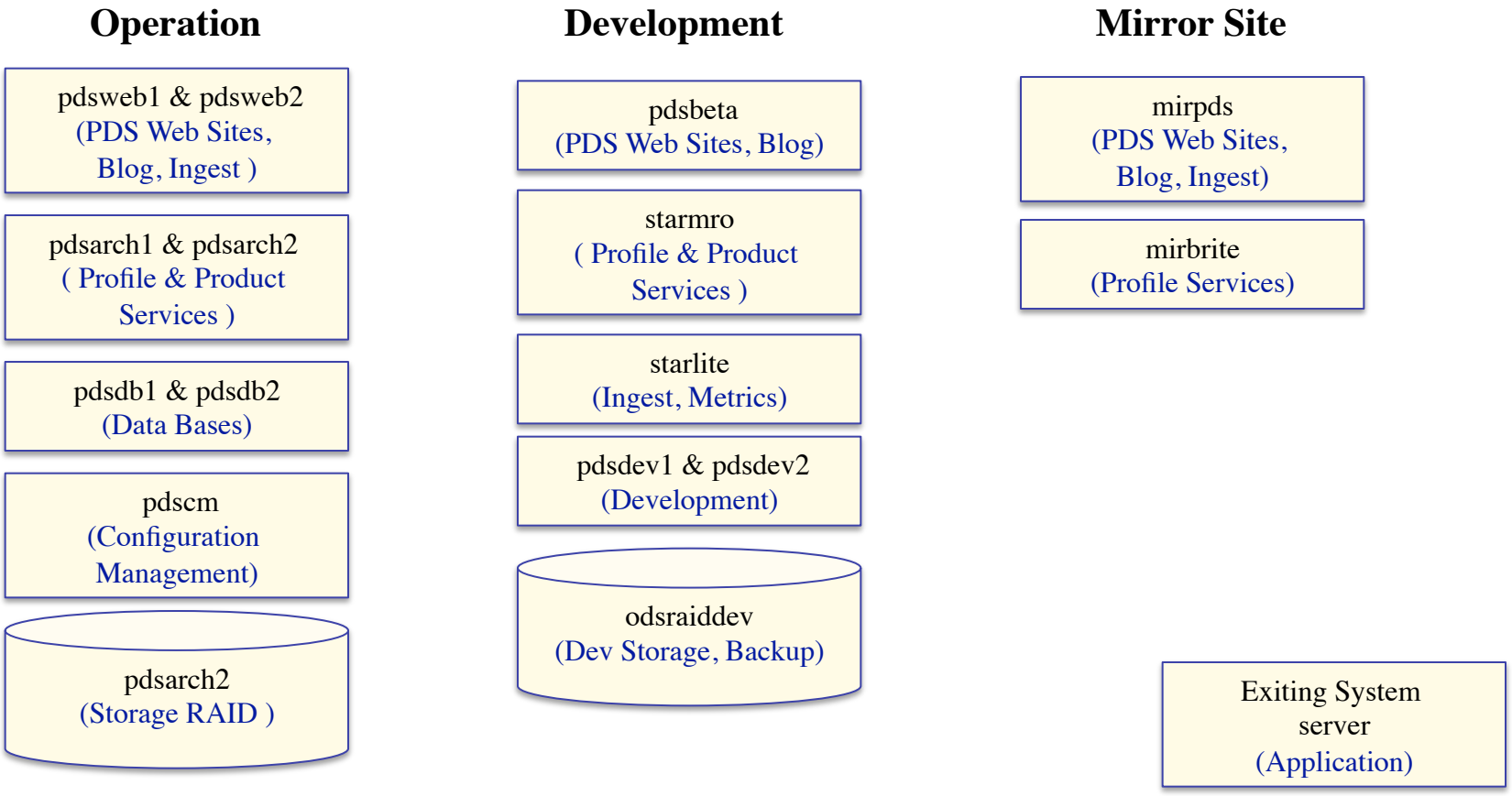
V&V Process

- System Tests
  - Unit Test
    - Perform by developers (EN, DNs)
  - Integration Test
    - Perform by integration and test team (EN, DNs)
  - Beta Test
    - Perform by selective users (EN, DNs, data providers, science community)
- Product Prototypes
- Organized build structure to verify PDS 2010 as a system (software and PDS3/PDS4 Standards) early on
- Metrics
  - E.g. # of defects, test cases, # of catalog migration, etc

Planned System Builds

Phase	Purpose	Release	Date
I Prototype Build 1 Ingestion	• Release a prototype Ingest Subsystem • Baseline PDS4 model, standards reference • Enable PDS3 to PDS4 catalog migration • Support testing of Node interfaces • Support PDS4 product prototypes	• PDS4 info model, standards reference, data dictionary, schemas baseline • PDS 2010 Ingestion subsystem including Harvest, Registry (Inventory, Document, Dictionary, Service), Report and Security services • Initial data provider tool suite • First set of process, documentation and tutorial	October 2010
II Operational Build 2 Distribution	• Initial operational PDS 2010 system and PDS4 Standards • Allow acceptance of PDS4 data into operational archive • Enable data migration from PDS3 to PDS4 • Allow user to search and access both PDS3 and PDS4 data	• E2E PDS 2010 system, Distribution subsystem including Search and Monitor services, revised web site, general portal applications • Complete tool suite • 1st release of PDS4 standards reference, data dictionary • Enhanced process, documentation and tutorial	October 2011
III Operational Build 3 User Capabilities	• Incremental release of operational PDS 2010 system to enhance user capabilities • Support data transformation • Support science services	• Integration of DN applications and science services • Order and Subscription services	June 2012

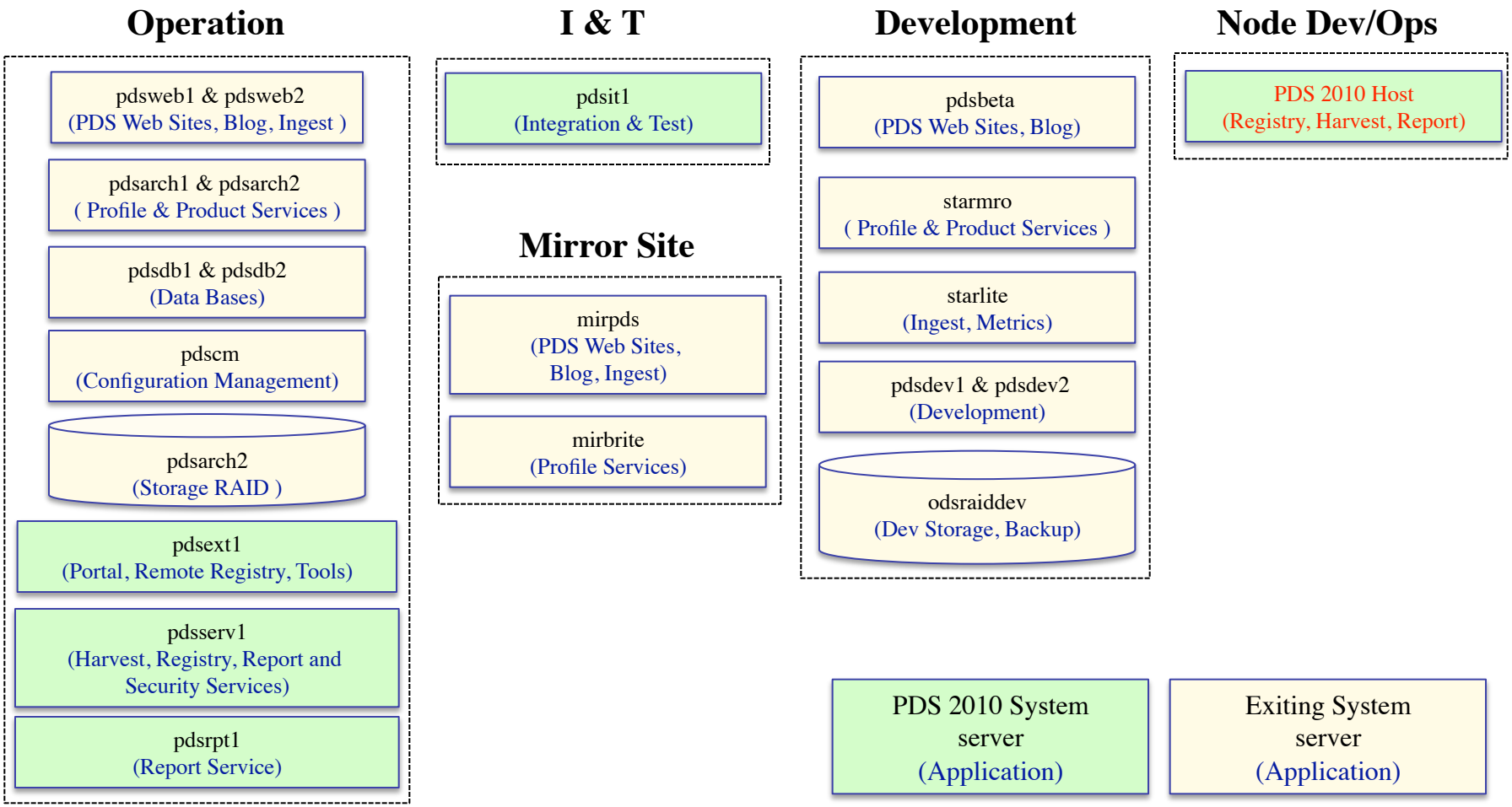
Current PDS3 System Diagram



Phase I

- Prototype Software deploy at EN
  - PDS Ingest subsystem (Harvest, Registry (Inventory, Document, Dictionary services), Report and Security services
  - Tools suite (Label design and validation, Label and Schema generation)
  - Internal administrative portal
- Prototype Software deploy at one or two DNs
  - Registry, Harvest services, and Report client
- Baseline PDS4 Model Specification, Standards Reference, Data Dictionary, Schemas, Data Provider's Handbook, Tutorials
- Testing resource
  - EN (unit, I&T), DNs (I&T)
- Documents
  - Release Description, Test plan, Test Report

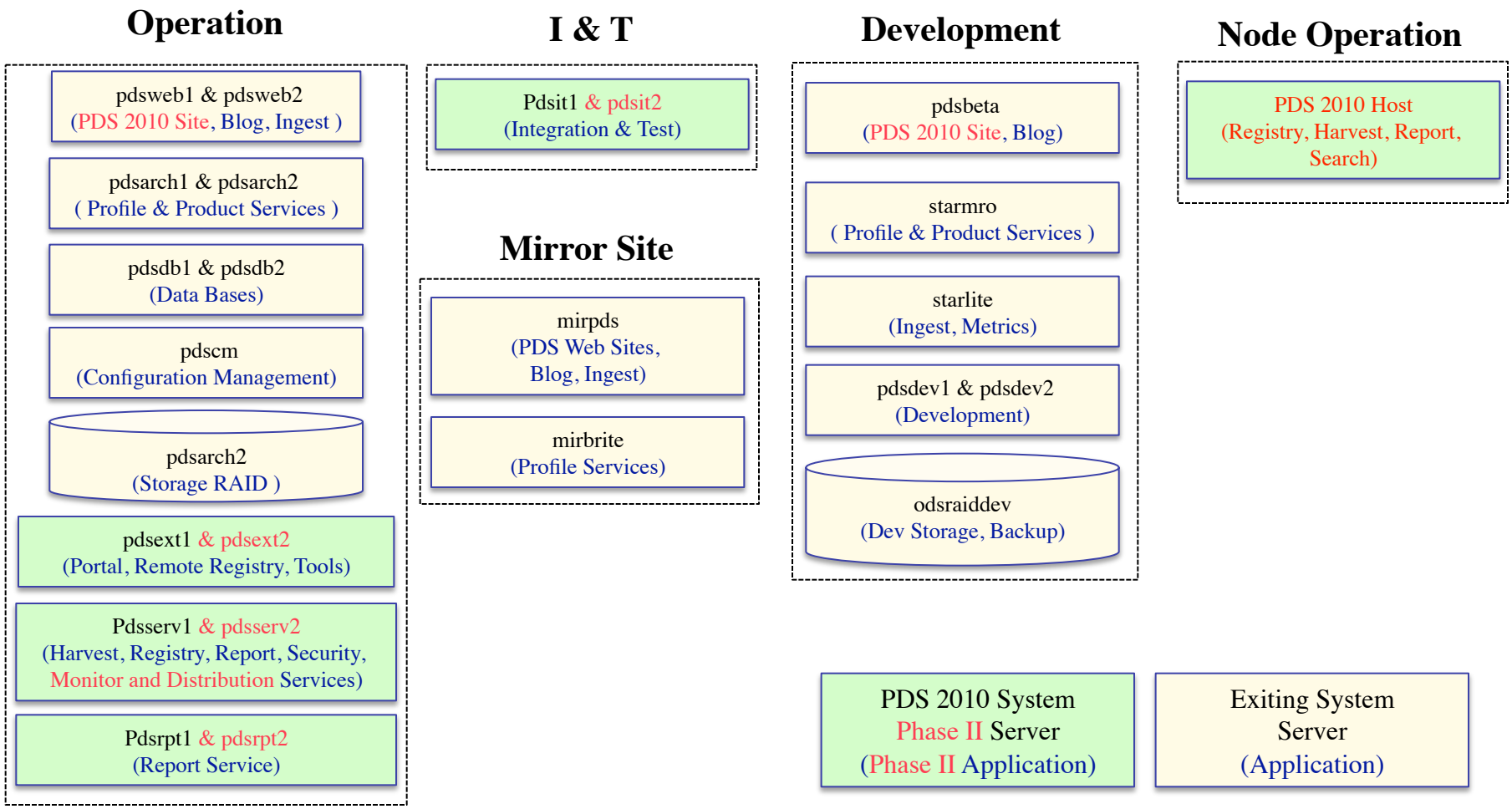
Phase I – System Diagram



Phase II

- Operational Software deploy at EN
  - Initial PDS 2010 System with Search and Distribution, Monitor services in addition to Ingest subsystem
  - Tool suite with additional Product Validation Tool
  - Revised web site
- Operational Software deploy at all DNs
  - Registry, Harvest, Search services, Report Client
  - DN Integration with PDS 2010 System
- Initial release of PDS4 Model Specification, Standards Reference, Data Dictionary, Schemas, Data Provider's Handbook, Tutorials
- Testing resource
  - EN (unit, I&T), Nodes (I&T, beta), selected data providers (beta)
- Documents
  - Release Description, Test plan, Test Report

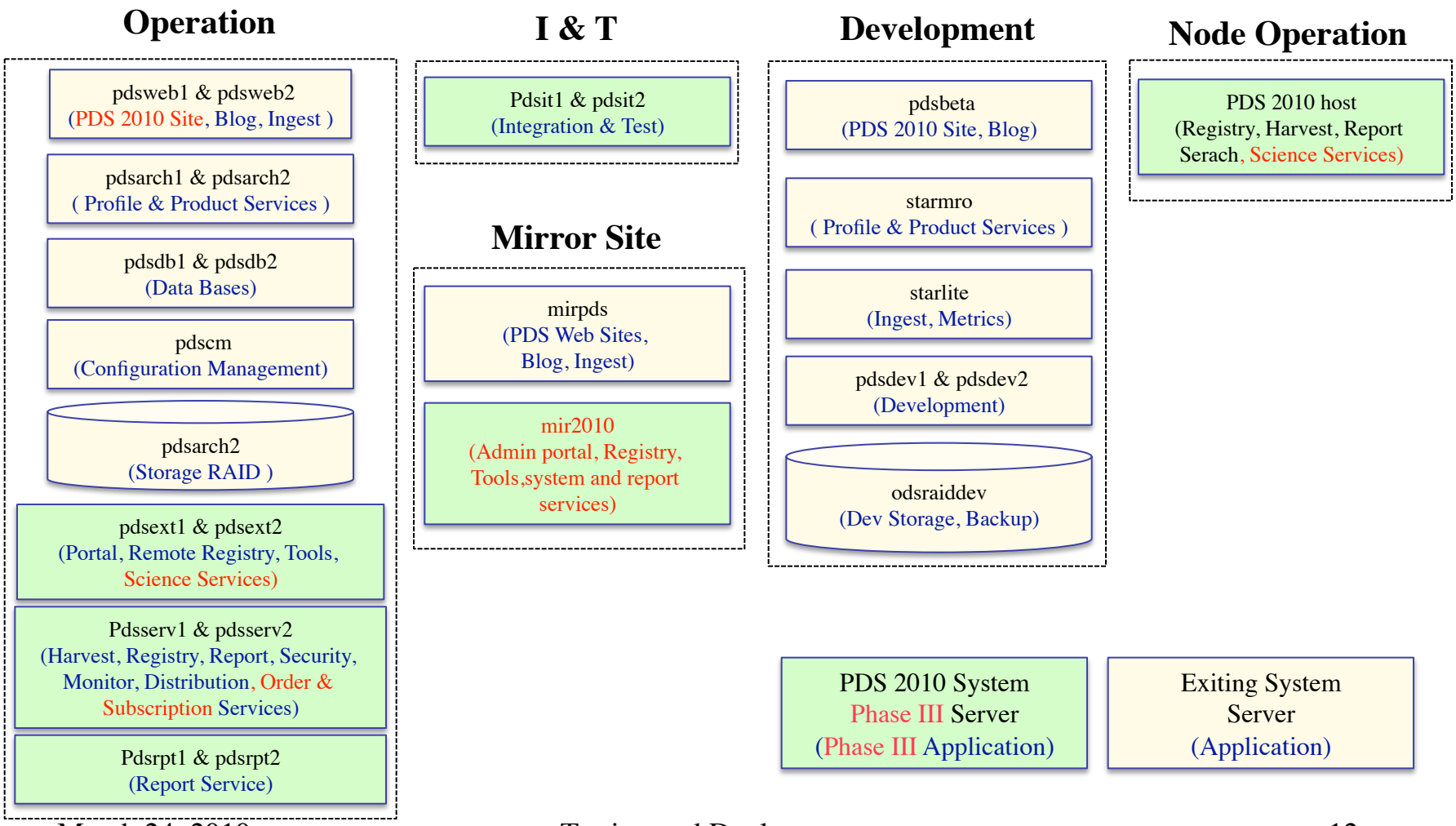
Phase II – System Diagram



Phase III

- Operational Software deploy at EN
  - 2nd release of PDS 2010 System with additional Order and Subscription service and science services
  - New portal with content management capabilities
- Operational Software deploy at Nodes
  - Science services
  - DN Integration with PDS 2010 System
- Operational mirror site deploy at UMD
- Testing resource
  - EN (unit, I&T), Nodes (I&T, beta), data providers and users (beta)
- Documents
  - Release Description, Test plan, Test Report

Phase III – System Diagram



Summary

- Well defined plans and processes, with participation from Nodes and users to ensure
  - Successful phased deployments
  - Deployed system meets requirements and purpose
  - Deployed system meets stakeholders expectation
  - Test and deployment activities will be documented