

The background of the slide is a dark blue technical drawing or blueprint. It features various mechanical and structural components, including curved lines, dashed lines, and solid lines. On the right side, there is a detailed cross-section of a complex structure, possibly a telescope component, with various internal parts and supports. The overall aesthetic is that of a high-tech engineering or scientific document.

LDF Next Cycle Highlights

DMLT F2F - 11/8/18



Large Synoptic Survey Telescope

L1 Development, EIA, Commissioning



- AuxTel Workshop (Dec). Modify Archiver and Header Services for AuxTel ops before shipment.
- Work with Early Pathfinders group, development as interfaces change/evolve, and execute regular EIA exercises. Start running regular tests on the L1 complete test stand.
- Shift to ComCam development, assembling raft-scale images, new API modifications
- Implement the catch-up archiver
- Implement OODS v1 and preliminary testing
- Configure and ship systems to Chile for support of spectrograph, Summit AA systems; migrate systems from NOAO facility to new Base Center
- Install new DAQ on Level 1 Test Stand
- Provision systems for support of ComCam on teststand in Tucson
- Work on interface between front-end and back-end of prompt processing
- Big unknowns:
 - When the new DAQ will be ready
 - When the new DAQ API will be ready
 - When the Spectrograph will ship to Chile
 - When the forwarders will be independent of the DAQ

Bulk Processing and Batch Production



- Complete DESC DC2 ImSim 1.2i DRP processing campaign and report
- Biweekly HSC RC reprocessing (maybe) and possible HSC PDR reprocessing
- Work alongside Gen3 group with development and delivery of documented needs
- Work with PipelineTask conversion testing, quick-turnaround of operational feasibility for activator development
- Testing of Pegasus operational features (bundling, scaling and restarts)
- Migration plans for setting up HTCondor flock
- Investigating computational resources at CC-IN2P3 (e.g., glideins, data transfers, job transfers, job submissions to Sun GridEngine, running small jobs, etc.); early understanding of operational issues/constraints

Containerized Application Management

- Re-architect K8s platform into distinct clusters configured for production (e.g., for demos), integration test (e.g., for application-level integration), and admin (for testing of K8s before deployment)
- Augment with additional provisioning
- Move PDAC nodes into K8s commons
- Support AAS demo, additional commissioning bootcamps
- Investigation and testing of elastic capability between batch (HTCondor) and K8s environments
- Development on remote job submission from notebook

Data Archiving and Data Backbone



- Support transfer and ingest from Tucson test stand
- Complete initial mirroring of SLAC test stand data to NCSA. Implement mechanism for efficient continuous mirroring (including locating, transferring, and keeping synced with changes).
- Generic transfer and ingest service for test stand(s)
- DBB use cases, requirements and design documented
- DBB detailed 3rd party software evaluation based on design; Rucio testing esp. for bulk data distribution
- Hand-off of raw data from online system to DBB, with full replication and protected storage
- Consolidated DB Gen3 schema implementation (views) and testing against schema; performance type assessments, e.g., for possible PPDB

- Prepare for and execute Operations Rehearsal #1. Stand up surrounding services, develop any shims, curate data, define configurations, document detailed procedures, generate reports, etc.
- Hosting ITIL training workshop in December at NCSA; LDF and LSST IT among attendees
- Milestone refresh
- Continued operations (maintenance and evolution) for construction:
 - New releases of K8, new security patches, new OS patches as needed, batch cluster, lsst-dev* machines, VM environments machines, and storage environments and networks. Improvements to redundancy, reliability, efficient configuration and administrative processes, etc.
 - Additional provisioning of FY19 systems in the LDF as needed.
 - Implement application-level monitoring
 - Ticket monitoring and assignment for incidents and requests
 - Improve reports needed for overall service management, scorecards for incidents, process for defining and evaluating availability and other service-level metrics