

Gen3 Middleware Planning, 2019-06



Large Synoptic Survey Telescope

Goals Ahead



- Finish up original RC2 + Oracle goal
- Make sure design accommodates CPP and AP
- API stabilization to enable wider adoption by friendly users
- Leverage available hands at PCW port-a-thon
- Investigate and design multi-user registry for a prototype in fall
- Ongoing bug fixes and stabilization

- Address outstanding bugs and accomplish RC2 + Oracle goal
- Limited refactoring:
 - Vectorized APIs for queries and inserts (addresses ingest/loading performance issues)
 - Delegation API for multi-user registries (enables multi-user registry explorations)
 - Partition the Dataset table (provides insulation from science-motivated schema changes)
 - Unique site IDs (support for multi-user registries)
- PipelineTask framework usability enhancements (ongoing through later phases)

Phase II



- Jim and Robert iterate on Gen3 CPP:
 - Convert a few existing Gen2 CPP tasks to Gen3
 - Flush out registry schema changes required by CPP
 - Prepare to leverage personpower available at PCW port-a-thon
- obs_lsst port to Gen3, including necessary data model changes
- NCSA pushes forward multi-user registry prototype initially provided by Jim. Risk on Jim's time.

- Have enough experience with CPP prototyping to leverage available hands to push through remaining CPP task ports and begin on AP task ports
- Build/port LSP example notebooks
- Spread knowledge and awareness of Gen3 middleware design and techniques, enabling more developer engagement

Phase III



- Continued delivery of ported tasks
- DataStore enhancements
- Integration activities at LDF with converted pipeline tasks
- HTCondor pool cluster integration
- QuantumGraph enhancements in support of continued BPS development
- Batch activator
- Continued refinement, stabilization, bug fixes