

Rubin Observatory

2020 Google Cloud Proof of Concept (DMTN-150)

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Goal

- Demonstrate the capability to run an operational Interim Data Facility
 - Not for development
 - Includes only resources sized in DMTN-135



Major Demonstrations

- Data Transfer
 - Chile to Google Cloud
 - Reduce latency over 2018 demo; try several alternatives
 - Increase bandwidth; private interconnect to Google Cloud in Miami
- Alert Production
 - Not tested in 2018
 - Use a minimal/prototype Prompt Processing framework
 - Connect with data transfer demonstration to be more end-to-end
 - But with simplified pipeline (no templates for ComCam)
- Data Release Production
 - Port from AWS; must use elastic, preemptible compute

Not In Scope

- Already demonstrated
 - Rubin/LSST Science Platform
 - Qserv database
- Not sufficiently mature
 - APDB

Stretch Goals

- Alert Distribution
- Transfer/processing of live ComCam images
- Scaling DRP to full HSC PDR2 or similar-sized DC2

Phases

- Phase 1a: Onboarding and test transfers over public Internet
- Phase 1b: Setup DRP at ci_hsc scale
- Phase 1c: Setup AP
- Phase 2a: Setup Interconnect and test transfers
- Phase 2b: Run DRP at RC2 scale or larger
- Phase 3: Run AP end-to-end from Chile
- Phase 4: Present and report on results and conclusions