2020 Google Cloud Proof of Concept (DMTN-150)

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DM Leadership Team | Virtual | May 13, 2020













CHARLES AND LISA SIMONYI FUND • • • FOR ARTS AND SCIENCES • • •





Goal

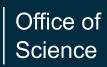
- Demonstrate the capability to run an operational Interim Data Facility •
 - Not for development
 - Includes only resources sized in DMTN-135



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Major Demonstrations

- Data Transfer \bullet
 - 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
 - Connect with data transfer demonstration to be more end-to-end But with simplified pipeline (no templates for ComCam)
 - Use a minimal/prototype Prompt Processing framework
- Data Release Production
 - Port from AWS; must use elastic, preemptible compute









Not In Scope

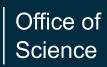
- Already demonstrated
 - Rubin/LSST Science Platform
 - Qserv database
- Not sufficiently mature
 - APDB



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Stretch Goals

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



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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



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