2020-08-20 Network Engineering Team Meeting notes

Date/Time

(Default schedule is second Thursday of Month.)

20 Aug 20200800 PT/0900 MT/1000 CT/1100 ET/1200 CLT

Meeting Online Connections:

Join Zoom Meeting
https://fiu.zoom.us/j/602918755?pwd=dmpheWkzZ0I2YWF3OGpWNzlUL3ltUT09

Meeting ID: **602 918 755**
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115.114.131.7 (India Mumbai)
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213.19.144.110 (EMEA)
103.122.166.55 (Australia)
209.9.211.110 (Hong Kong SAR)
64.211.144.160 (Brazil)
69.174.57.160 (Canada)
207.226.132.110 (Japan)

Meeting ID: 602 918 755
Password: **000000**

Meeting Recording:

TBD

Attendees

- Jeff Kantor (JK) (Rubin Observatory)
- Unknown User (rlambert) (RL) (Rubin Observatory)
- Julio Ibarra (JI) FIU/AmLight
- Unknown User (kollross) (MK) NCSA

- Jeronimo Bezerra (JB) FIU/AmLight
- Albert Astudillo (AA) REUNA
- Renata Frez (RZ) RNP/AmLight Brazil
- Claudia Inostroza (CI) REUNA
- Paul Wefel (PW) ESnet
- Kate Robinson (KR) ESnet
- Gizella Kapus (GK) ESnet
- Vasilka Chergarova (VCh) FIU/AmLight
- Phil DeMar (PD) FNAL
- Richard Hughes-Jones (RHJ) GEANT
- Aluizio Hazin (RNP)
- Cristián Silva (Rubin Observatory)
- Joshua Hoblitt (Rubin Observatory)

Guests

- [Stuart McLellan](#) (SM) RENATER
- [Vincenzo Capone](#) (VCa) GEANT
- [Ed Moynihan](#) (EM) NEARR, Global NOC, IU

Goals

- Coordination of networking activities across Rubin Observatory

Discussion items

Time (PT)	Item	Who	Notes
	NET Action Items Status	Jeff Kantor	**Reminder: Work on your action items: International Communications (aka Long-Haul Networks)** **Network activities schedule (subject to COVID19 impacts):** January - Continued work on Rubin Observatory Network Verification Plan (including JIRA). February - Completed draft Rubin Observatory Network Verification Plan (including JIRA). March - Scheduled Rubin Observatory Networks Pre-Verification Review for May 18 - 19 April - Prepare for Rubin Observatory Networks Pre-Verification Review. Submit LSST Change Request to update LSE-78 Rubin Observatory Network Design (including Chilean, International, and US networks), and related milestones in PMCS. Complete LDM-732 Rubin Observatory Networks Pre-verification Baseline. May - Complete FY19, FY20 NET Reports and Technical Document June - Conduct and respond to actions from Rubin Observatory Networks Pre-Verification Review. Meet with GlobalNOC re VNOC support. July - Pre-Ops Rehearsal 2 testing. August - Ops Rehearsal 2/Pre-verification testing. September - LS restart, LS - SCL 40G upgrade. (hopefully) October - Start Verification Testing November - Update Rubin Observatory Operations & Management Plan, Network Contracts and SLAs.
	Update on CONUS Networks	Paul Wefel Jeronimo Bezerra	**CONUS Networks, including ESnet:** ESnet 6 Atlanta - Chicago now on new fiber optic platform. Updating contract to allow for new US DF location. Will upgrade StarLight router soon, should not have an impact on our networks. Changed policy on 2 x 20G links to allow for higher bursts. No plans to maintain Peachtree - SOCS backhaul. FIU would like a way to provide redundancy in Atlanta. ACTION ITEM
	Chilean /International Networks Update	Unknown User (rlambert) Albert Astudillo Jeronimo Bezerra	**Developments in La Serena and end-to-end service to NCSA for upcoming Auxiliary Telescope Traffic and general (internet, mail, voice) traffic:** Summit and Base are still shut down, La Serena in full lockdown. No date for LS - SCL 40G upgrade or when LATISS will be running again.
	NCSA - CC-IN2P3 Networks update	Unknown User (kollross) Richard Hughes-Jones Stuart McLellan	**NCSA - CC- IN2P3 network:** Connections GEANT/RENATER changed from n x 10G to 100G in Paris and Geneva. We had 20 G (2 x 10G), not sure how our service has changed.

	Other Discussion Topics	By topic	**Rubin Observatory Network Verification: Jeff Kantor** Need to "put a ribbon" on testing up to now, will not produce DMTR-241 report for Joint Status Review. **Rubin Observatory Networks, SLAs for Operations: Jeff Kantor** Waiting on decision on US Data Facility. NSF and DOE announced there will be an opportunity solicitation, but still no firm date, hoping for Spring/Summer, 2021. We have also agreed to update the LSST Network Operations and Management Plan (document-11918) for operations. **Virtual NOC: Jeronimo Bezerra, Unknown User (rlambert), Albert Astudillo, Unknown User (kollross) Vincenzo Capone** Pending proposal from Global NOC. **Network Security:** Brazil installed Huawei equipment in Porto Alegre - Sao Paolo, not usable by Rubin Observatory. Exploring options for Buenos Aires - Sao Paolo new link, additional funds required.
	Network Design and End-to-End Test Plan and QoS planning	Jeronimo Bezerra Unknown User (rlambert)	Joshua Hoblitt , Renata Frez , Unknown User (kollross) , ESnet folks working on perfSonar and preliminary tests, up to and during Operations Rehearsal 2, over Rubin Observatory network. Network seems to be working to spec, but DM servers cannot load data fast enough to get high throughput. Have already had test where highest with perfSonar is 9.4 G and 9.6 G out of possible 10 G. DTN/iPerf tests over last year have also had 10 - 20 G. Recent low (Mb/s) disk to disk tests were due to DM server tuning and local network, not LHN. Rsynch and scp transfers were getting 8 - 10 M, underlying protocol was throttling transfers. Changing to (old) bb copy protocol increased to 150 Mb on same machines. Need to document with a report. ACTION ITEM. Though we have shown the network is working fine memory to memory, we need disk - memory and disk - disk measurements. We should also engage expertise at FNAL, GEANT, etc. on large file transfers. Kian-Tat Lim getting 1.5 G from servers being used for Google Cloud processing proof of concept from La Serena to Florida. Jeff Kantor biggest concern is lack of urgency to solve this, we shouldn't wait until end of commissioning and then have to rush a solution. ACTION ITEM
	Other business	Any	Rubin Observatory Rebaseline - No news Effective October 1, 2020 Jeff Kantorwill be going to 50% time. September meeting will be last as LHN CAM and co-chair of NET. Transitioning to Cristián Silva starting in October.
	Wrap up and next meeting	Jeff Kantor	Wrap up and Next meetings: 10 Sep 2020 All meetings at 0800 PT/0900 MT/1000 CT/1100 ET/1200 CLT (subject to time changes)

Action items

- [ ] Kate Robinson Confirm ESnet has plans to maintain Peachtree - SOCS backhaul. FIU would like a way to provide redundancy in Atlanta. **18 Feb 2021**
- [ ] Cristián Silva Enlist Joshua Hoblitt to write report documenting disk - disk testing to date. **10 Sep 2020**
- [ ] Cristián Silva Develop plan for disk - disk, disk - memory tests with various protocols, engaging other NET expertise **30 Sep 2020**
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