

2020-01-09 Network Engineering Team Meeting notes

Date/Time

(Default schedule is second Thursday of Month.)

09 Jan 2020 0800 PT/0900 MT/1000 CT/1100 ET/1200 CLT

Meeting Online Connections:

Join Zoom Meeting

<https://fiu.zoom.us/j/602918755>

Meeting ID: 602 918 755

One tap mobile

+1 646 876 9923,,602918755# US (New York)

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Dial by your location

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Meeting ID: 602 918 755

Find your local number: <https://zoom.us/u/acCmuJsGYI>

Join by SIP

602918755@zoomcrc.com

Join by H.323

162.255.37.11 (US West)

162.255.36.11 (US East)

221.122.88.195 (China)

115.114.131.7 (India)

213.19.144.110 (EMEA)

103.122.166.55 (Australia)

209.9.211.110 (Hong Kong)

64.211.144.160 (Brazil)

69.174.57.160 (Canada)

207.226.132.110 (Japan)

Meeting ID: 602 918 755

Meeting Recording:

TBD

Attendees

- [Jeff Kantor](#) (JK) LSST
- [Unknown User \(rlambert\)](#) (RL) LSST
- [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) (absent)

Guests

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

Goals

- Coordination of networking activities across LSST

Discussion items

Time (PT)	Item	Who	Notes
	NET Action Items Status	Jeff Kantor	<p>Reminder: Work on your action items: International Communications (aka Long-Haul Networks)</p> <p><u>Documentation updates schedule:</u></p> <p>August - LSST Joint NSF/DOE Status Review will establish new overall project schedule, commissioning milestones. Observing with ComCam pushed back and shortened, observing with FullCam pushed back. We updated Network Milestones sheet accordingly. COMPLETE (See attachment)</p> <p>September - Created FY20 contract amendments for FIU, REUNA, NCSA. COMPLETE</p> <p>October - Complete LSST Change Request to update LSE-309 Summit - Base ITC Design Document (including Summit and Base networks) and related milestones in PMCS. COMPLETE</p> <p>November/December - (Holidays and other activities.)</p> <p>January - Continue work on LSST Network Verification Plan (including JIRA). Develop draft LSST Operations Network SLAs. See discussion below.</p> <p>February - Prepare for LSST Networks Review. Submit LSST Change Request to update LSE-78 LSST Observatory Network Design (including Chilean, International, and US networks) and related milestones in PMCS. Including updated diagrams, including ESnet, etc. Complete work on LSST Network Verification Plan (including JIRA). See discussion below.</p>
	Update on CONUS Networks	Paul Wefel Jerónimo Bezerra	<p><u>CONUS Networks, including ESnet:</u></p> <p>What is expected start date for working on Phase 2 (2 x 100 Gbps ATL - CHI)?(See Email thread)</p>
	Chilean /International Networks Update	Unknown User (rlambrt) Albert Astudillo Jerónimo Bezerra	<p><u>Developments in La Serena and end-to-end service to NCSA for upcoming Auxiliary Telescope Traffic and general (internet, mail, voice) traffic:</u></p> <p>ATS instrument and servers have arrived in Chile, installation starting soon, for expected on-sky in February.</p> <p>Brought old perfSonar node back to La Serena, two new ones have not been received, one will go on summit, other in base but not clear if on LSST side or AURA side.</p> <p>At AmLight PoP in Santiago, upgraded to 100G boards, activated 100G DTN, activated perfSonar node, have taps. At NCSA have 100G node in place.</p> <p>La Serena - Santiago tried upgrade, but new DWDM 100G card had problems, working with Infinera to debug. Hope to have by early next week. (Jerónimo Bezerra this is typical of 10G to 100G migrations). No evidence so far that the card has design flaws. GEANT uses Coriant boxes and cards, multiple 100G. NEW ACTION ITEM</p> <p>Will start to test resilience as soon as LS - SCL is ready. Have multiple paths LS - NCSA. Need to define how to provide Verification and Validation and regular automated testing and fail-overs. (See V&V discussion as well).</p>
	NCSA - CC-IN2Pe Networks update	Unknown User (kollros)	<p><u>NCSA - CC-IN2P3 network:</u></p> <p>Richard Hughes-Jones (GEANT) works on high-performance networks, working on SKA networks. NEW ACTION ITEM</p>

Other Discussion Topics	By topic	<p>LSST Network Document Update: Julio IbarraJeff Kantor</p> <p>https://docs.google.com/document/d/1ZvpaHwIzHHMuqRXJEomIqQNH_8tP_EfiV6S1SzyonU/edit</p> <p>Received input from people, but need to incorporate.</p> <p>LSST Network Verification: Jeff Kantor</p> <p>LSST Networks needs to be formally verified as ready for LSST System Integration and Commissioning. 2019-07-11 Meeting published a list of requirement to be verified and a diagram of the JIRA test artifacts that must be done. (NOTE: Confluence can't render the JIRA test artifacts attachment, but it is a valid JPG file. Download it to view it.) Also see Network Verification Plan and Matrux, recently updated, on LSST-NET home page.</p> <p>Management wants a network verification readiness review sometime in February - March, need to discuss timing and scope.</p> <p>LSST Network SLAs for Operations: Jeff Kantor</p> <p>FIU flow-down SLAs provided, will use as template for others.</p> <p>LSST doing due diligence on networks for various operations models with DOE paying 50% and NSF paying 50%.</p> <p>Virtual NOC: Jeronimo Bezerra, Unknown User (rlambert), Albert Astudillo, Unknown User (kollross) Vincenzo Capone</p> <p>(See 20191022 NET Meeting and email thread on NET mailing list)</p> <p>Jeff Kantor , Julio Ibarra , Phil DeMar - Met with Ed Moynihan, Cory Donovan of Global NOC to discuss requirements and possible involvement. We need to fill out initial network assessment questionnaire.</p> <p>Network Security:</p> <p>The US Federal government is asking us to respond to securing networks against exploiting LSST images to find satellites. The project has drafted a response (DMTN-108) and some of us have provided comments. A question: we suggested monitoring attenuation, what would it take to do that? Jeronimo BezerraCan monitor in transceivers if we own infrastructure, not possible in all links. Only comprehensive solution is to encrypt data. Could be done at Layer 2 or Layer 3 or application (e.g. TLS) (or combination). NEW ACTION ITEM</p>
Network Design and End-to-End Test Plan and QoS planning	Jeronimo Bezerra	Need to finish 100G migration in Chile to resume work on this.
Other business	Any	
Wrap up and next meeting	Jeff Kantor	<p>Wrap up and Next meetings:</p> <p>13 Feb 2020</p> <p>12 Mar 2020</p> <p>09 Apr 2020</p> <p>All meetings at 0800 PT/0900 MT/1000 CT/1100 ET/1200 CLT (subject to time changes)</p>

Action items

- ☒ [Albert Astudillo](#) Send network configuration to [Stuart McLellan](#), [Richard Hughes-Jones](#) for comparison/debugging Coriant/Infinera 100G issue 16 Jan 2020
- ☒ [Richard Hughes-Jones](#) read LSE-78, schedule meeting with [Unknown User \(kollross\)](#), [Stuart McLellan](#) to get up to speed on NCSA - CC-IN2P3 plan 16 Jan 2020
- ☒ [Julio Ibarra](#) Assign sections of GlobalNOC questionnaire to NET members and fill in any that can 16 Jan 2020
- ☒ [Jeronimo Bezerra](#) Send options for attenuation monitoring, encryption at Layer 2, 3 to [Jeff Kantor](#) for DMTN-108 16 Jan 2020
- ☒ [Jeff Kantor](#), [Julio Ibarra](#) Prepare agenda, requests for information for April 2020 SAAAC and NET meetings. SAACC and NET meeting invitations and meeting page link sent out, all should reply on attendance, register. Draft agenda is on meeting page. 13 Feb 2020

