

# 2021-07-08 Network Engineering Team Meeting notes

## Date/Time

(Default schedule is second Thursday of Month.)

08 Jul 2021 0800 PT/0900 MT/1000 CT/1100 ET/1300 CLT

Meeting Online Connections:

Join Zoom Meeting

<https://fiu.zoom.us/j/602918755?pwd=dmpheWkzZ0l2YWV3OGpWNzIUL3ltUT09>

Meeting ID: 602 918 755

Passcode: **000000**

One tap mobile

+16468769923,,602918755# US (New York)

+13017158592,,602918755# US (Germantown)

Dial by your location

+1 646 876 9923 US (New York)

+1 301 715 8592 US (Germantown)

+1 312 626 6799 US (Chicago)

+1 669 900 6833 US (San Jose)

+1 253 215 8782 US (Tacoma)

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Meeting ID: 602 918 755

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Join by SIP

[602918755@zoomcrc.com](mailto:602918755@zoomcrc.com)

Join by H.323

162.255.37.11 (US West)

162.255.36.11 (US East)

115.114.131.7 (India Mumbai)

115.114.115.7 (India Hyderabad)

213.19.144.110 (Amsterdam Netherlands)

213.244.140.110 (Germany)

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

Passcode: 000000

Meeting Recording:

TBD

## Attendees

- [Jeff Kantor](#) (JK) (Rubin Observatory)
- [Julio Ibarra](#) (JI) FIU/AmLight
- [Jeronimo Bezerra](#) (JB) FIU/AmLight
- [Cristián Silva](#) (Rubin Observatory)
- Renata Frez (RZ) Amlight/Brazil
- [Richard Hughes-Jones](#) (RHJ) GEANT
- [Phil DeMar](#) (PD) FNAL
- [Paul Wefel](#) (PW) ESnet
- Matt Kollross (MK) NCSA
- [Ed Moynihan](#) (EM) NEARR, Global NOC, IU
- [Kate Robinson](#) (KR) ESnet
- [Vasilka Chergarova](#) (VCh) FIU/AmLight
- [Albert Astudillo](#) (AA) REUNA
- [Stuart McLellan](#) (SM) RENATER
- Gisella Kapus (GK) ESnet

Goals

- Coordination of networking activities across Rubin Observatory

## Discussion items

| Time (PT) | Item                                   | Who                                                    | Notes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------|----------------------------------------|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           | NET Action Items Status                | Philip DeMar                                           | <p><b>Reminder: Work on your action items: <a href="#">International Communications (aka Long-Haul Networks)</a></b></p> <p><b>Network activities schedule (subject to COVID19 impacts):</b></p> <p>January - Continued work on <a href="#">Rubin Observatory Network Verification Plan</a> (including JIRA).</p> <p>February - Completed draft <a href="#">Rubin Observatory Network Verification Plan</a> (including JIRA).</p> <p>March - Scheduled <a href="#">Rubin Observatory Networks Pre-Verification Review</a> for May 18 - 19</p> <p>April - Prepare for Rubin Observatory Networks Pre-Verification Review. Submit LSST Change Request to update <a href="#">LSE-78 Rubin Observatory Network Design</a> (including Chilean, International, and US networks), and related milestones in PMCS. Complete <a href="#">LDM-732 Rubin Observatory Networks Pre-verification Baseline</a>.</p> <p>May - Complete FY19, FY20 NET Reports and Technical Document</p> <p>June - Conduct and respond to actions from Rubin Observatory Networks Pre-Verification Review. Meet with GlobalNOC re VNOC support.</p> <p>July - Pre-Ops Rehearsal 2 testing.</p> <p>August - Ops Rehearsal 2/Pre-verification testing.</p> <p>September - Cisco ACI review, Huawei analysis</p> <p>October - Start Verification Testing, LS restart, LS - SCL 40G upgrade. (hopefully) -</p> <p>November - Update Rubin Observatory Operations &amp; Management Plan, USDF Selection, CP Restart, Network Contracts and SLAs.</p> <p>December - Updates on G-NOC service progress, Brazil path (Huawei) options, planning for US Data Facility at SLAC</p> <p>January - Updates on G-NOC service progress, Brazil path (Huawei) options, planning for US Data Facility at SLAC</p> <p>February - Agreed to propose NSF to DOE include funding of VNOC and Huawei in the ops proposal / USDF continuing discussing footprints, power cooling.</p> <p>March - Keep 2x20GB through Chicago during Construction. End of Construction Aug-FY23, would need 2x100 to SLAC.</p> <p>New processing facility in UK, some data that goes to Europe will go to UK (1/4), likely 75% of data will be processed in Europe so more data will come back, so the 2x10GB link will likely increase 7-7.5GB per year</p> |
|           | IPv6 Talk                              | Nick Buraglio                                          | <p>OMB-M-21-07 ipv6 Only 80%, there will be still ipv4 to translate to legacy equipment. Default to ipv6 if available</p> <p>Vendors don't always agree on ipv6 support and ipv6 only</p> <p>Limited support in industrial control networks. Ipv6 only will still require translation to ipv4</p> <p>Pros: Low latency, GUA, scalable, etc.</p> <p>Recommendation, use ipv4 where you need it. If there's no need for ipv6, dual stack is the way, keep using ipv4 until ipv6 is needed.</p> <p>Lots of NAT64 options, including open source, are available for IPv6IPv4 translation. Science flows will likely not work well through address translation mechanisms. VPNs may make the most sense where IPv6 can be used on both ends, but IPv4 is required for transit.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|           | Update on CONUS Networks               | Paul Wefel<br>Jeronimo Bezerra                         | <p><b>CONUS Networks, including ESnet:</b></p> <p><a href="#">Paul Wefel</a> Updates to LSE-78</p> <p>Santiago - Porto Alegre fully implemented next</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|           | Chilean /International Networks Update | Cristián Silva<br>Albert Astudillo<br>Jeronimo Bezerra | <p><b><u>Developments in La Serena and end-to-end service to NCSA for upcoming Auxiliary Telescope Traffic and general (internet, mail, voice) traffic</u></b></p> <p><a href="#">Cristián Silva</a> Backup link almost there, Auxtel run this week, all is well.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

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|  | USDF & NCSA<br>- CC-IN2P3<br>Networks update | <a href="#">Unknown User (kollross)</a><br><a href="#">Mark Foster</a><br>Richard Hughes-Jones<br>Stuart McLellan | <b><u>USDF &amp; NCSA - CC- IN2P3 network:</u></b><br><a href="#">Mark Foster</a> Updates to LSE-479                                                                                                                                                                                                                                                                                                                                               |
|  | Other Discussion Topics                      | By topic                                                                                                          | <b><u>Rubin Observatory Network Verification:</u></b><br>No updates<br><b><u>Rubin Observatory Networks, SLAs for Operations:</u></b><br><br><b><u>Virtual NOC:</u></b><br>No updates<br><b><u>Document update status summary:</u></b><br><br><b><u>Huawei bypass:</u></b><br>The quotes for Huawei bypass options have expired. Julio is pursuing quote refreshes. Will wait until the post-COVID project baseline is official before proceeding. |
|  | Other business                               | Any                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|  | Wrap up and next meeting                     | <a href="#">Philip DeMar</a>                                                                                      | Wrap up and Next meetings:<br>12 Aug 2021<br>All meetings at 0800 PT/0900 MT/1000 CT/1100 ET/1300 CLT (subject to time changes)                                                                                                                                                                                                                                                                                                                    |

## Action items

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