2017-11-21 LSST use of ESnet Meeting notes

Date/Time

21 Nov 2017 8am PT

Meeting Online Connections

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Meeting Recording

Not used

Attendees

- Julio Ibarra (JI)
- Unknown User (kollross) (MK)

- Jeronimo Bezerra (JB)
- Paul Wefel (PW)
- Jeff Kantor (JK)

Goals

- Coordination of networking activities for LSST use of ESnet

Discussion items

Time (PT)	Item	Who	Notes
1400	Introduction and Context	Jeff Kantor	From the Oct 13th meeting between the LSST project and DOE the following action item emerged. We need a well-defined technical approach within 3 months, and costing and funding within 6 months. There are two aspects to ESNet support to LSST Operations: 1. LSST Observatory/Facility Operations (the focus of the current request, Jeff Kantor lead coordinator) 2. LSST Collaboration/DESC Operations (the focus of another draft document, Don Petravick lead coordinator) Focus now is on #1.

1415	Discussion Items	All	**Clarification of timeline** Jeff Kantor ESnet participation in fy19, and LSST operations in fy2020. ESnet needs to line up and start participating in fy19. Provisioning to start by fy19. Moving data by fy2020. LSST can do without ESnet in fy19. What is comfortable for ESnet? If ESnet carries LSST traffic in fy20, that will meet LSST requirements. ESnet people discussion. Contextual material regarding implementation and usage. That information should exist. PW can drive the packaging for ESnet people. JB and MK can help provide the information. **Brainstorm connection options:** JB: PW proposed 3 options. 3 Options are described in PW's LSST-LHN ESnet colab meeting notes, and copied here: Toward the end of October Matt, Jeronimo and Paul exchanged email brainstorming some ideas 1. Connect two router or switch ports to two client ports on the ESnet Ciena system.Each port would take a different path to Chicago and hand off the NCSA a client port. ESnet doesn't have built-in optical protection. 2. Connect a single router or switch port or dwdm client port to the ESnet Atlanta router and use a VPLS circuit to Chicago with a VPLS backup path and fast-reroute or something similar handing off a vlan to NCSA on their ESnet connection. 3. This is here just for trying to be complete. Establish BGP peering with the LSST router into a L3VPN within ESnet and have NCSA peer with the L3VPN. Traffic would route over the general IP network and around failures with everything else. JB: need dedicated network services, not a pseudo wire. JB: what can I do to help? PW: Referring to logical network diagram, not sure what circle means on the two paths from Atlanta to Chicago. JB: Circle means protection at the optical layer? Circle means two diverse paths. AmLight will connect to ESnet transponders. Ignore circle for now. PW: ESnet does not provide optical protection. Transport is what ESnet will provide. ESnet does not need to provide protection. JB: Create a p2p link at the optical layer. LSST NET will notify ESnet if link goes down. JB: When there's a connection at Atlanta, can first activate at 10G. Circuit from Atlanta will come after connection from Boca Raton to Atlanta is established. It does not make sense to provision dedicated 10G for transport. PW: a 10G routed port can be provided for fy19. JK: Dedicated path diverse links not needed until 2021. JB: Will write all this down into a tech document. JK: In addition to technical document, an Implementation plan and cost for what tech doc says. **Instrumenting the network paths:** JK: Other network segments, instrumenting with pS and using MADDash. If we asked for this capability for the Atl to Chic segments, will that present any kinds of issues? PW: available now through ESnet portal. Will want this capability in 2021. JK: not specifically called out in the request. REquest can be revised if necessary. JB: Addressing to wrong group. From ESnet, the network service will be only optical layer. They will not be able to test. The LSST network will instrument the path, alongside the other active equipment. **Collocation:** JI: In Atlanta, can ESnet provide collo, or do we need to request from data center operator? PW: ESnet shares colo with I2. ESnet would not be able to provide colo. 600 W Chicago: available cabinets in the cage. JK: NCSA has multiple locations in Chicago. Do green and red paths in diagram show up in the same or different locations in Chicago? How does NCSA connect to Chicago for path diversity? MK: NCSA peers with ESnet at 600 West and 710 Lakeshore Dri. Connections are two optically diverse paths up to Chicago JB: in those locations can you provide colocation? MK: probably not. 600 space is limited. 710 might be more flexible. At 710 NCSA does not control those racks. JI: suggested PW take an action on the colo **Document:** Starting draft of tech document - PW volunteered to generate draft. Google Docs is preferred. **DOE Process:** JK: What is the DOE - ESnet process that this tech proposal becomes an actual thing? What steps will Inder and PW go thru to provide these links? PW: not sure of process at this time. Broad strokes, should involve proposal to ASCR. PW will flesh out steps. PW: it would be good to know what we will be asked to produce. Tech document and end2end plan should suffice. JK: if fy20 requirement creates a problem, can discuss. There's flexibility.
	Wrap up and next meeting	Julio Ibarra	Wrap up and Next meeting date and agenda topics: Next meeting will be 15 Dec 2017 7am PT, 10pm ET, 12pm CLT

Action items

- [x] Paul Wefel to create google doc for technical specification 22 Nov 2017
- [x] Julio Ibarra, Paul Wefel to create "big picture" document for DOE 15 Dec 2017
- [x] Julio Ibarra to find out colocation options in Atlanta 28 Feb 2018