

LHCONE P2P service - Status update

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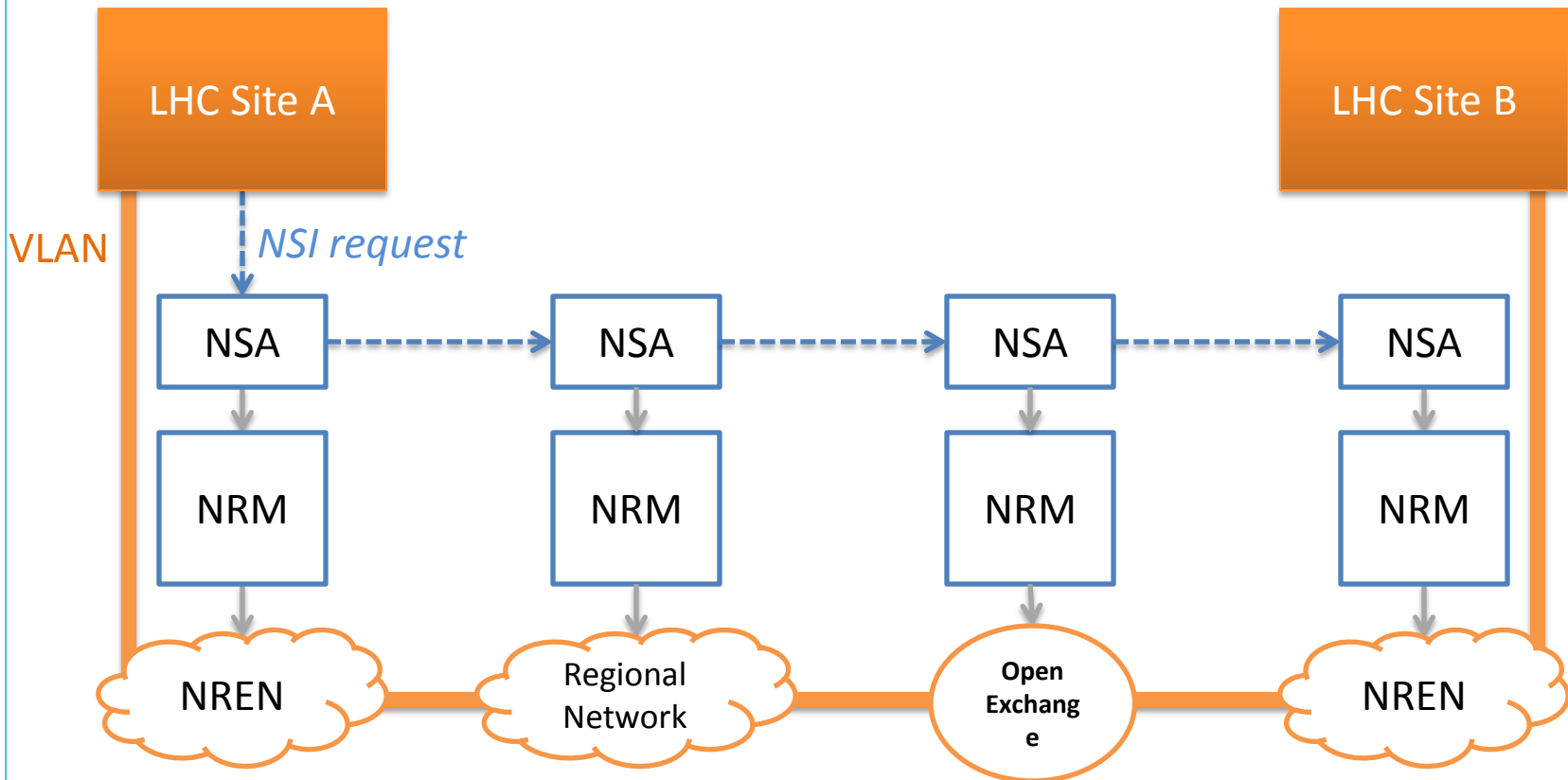
Introduction of activities

- Green light in Ann Arbor, Sep 2014:
 - **Goal** is to demonstrate a working implementation/solution of the LHCONE Point2Point Experiment with a number of LHC sites, based on the Automated GOLE infrastructure
- **Activity 1:** Connecting LHC sites and AutoGOLE
- **Activity 2:** Middleware integration

AutoGOLE



NSI request, schematic



ESnet OSCARS/NSI deployment update

- Extended OSCARS service selection
 - Guaranteed bandwidth or best-effort delivery
 - Hard (packet drop) or soft policing (packet remark)
 - Unprotected or protected (with dynamic reroute and best effort delivery)
- Deployment and testing of separate NSI Aggregator, PCE, and DDS components completed
 - Currently improving scalability of path finder, and fixing issues with third-party Oracle/Apache components.
 - Topology validation and control plane visualization.
- Introduction of automated tool for generation of NSI NML-based topology from NMWG (OSCARS) topologies
 - No longer need to manually generate NML topologies or STP mapping files for OSCARS NSI-Bridge.
- Cutover of A-GOLE topologies to new NSI STP identifier format
 - Currently exposing 223,477 bidirectional STP on the A-GOLE fabric.
 - Top three networks ESnet (102,440 [abridged]), GEANT (46,234), and SURFnet (21,991).

NORDUnet update

GÉANT update

SURFnet & NetherLight BoD update

- SURFnet BoD
 - Open source software developed by SURFnet
 - Guaranteeing bandwidth
 - Requesting of services via NSlv2 by authorized users (SURFconext)
 - Under the hood speaking MTOSI to Ciena OneControl
 - Running on Ciena 5410 platform within SURFnet and NetherLight
 - Running aggregator

Evaluation

- SURFsara has been CONNECTED
- DE-KIT has been CONNECTED
- Caltech CONNECTED (via ESnet), tests planned in short term
- Brookhaven NL and FERMILAB
 - Should be connected via ESnet (new STPs), waiting for confirmation to join this effort

Experience with automated connections

- Done in 2014Q4 at SC'14
- **SURFsara** – NetherLight – GÉANT – DFN – **DE-KIT**
 - Requesting bandwidth through NSIv2
- Bruno to present findings