

[Ciena WaveLogic 6 Nano Coherent Pluggable Demonstration]

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Abstract

Ciena's WaveLogic 6 Nano (WL6n) is the latest offering in Ciena's Coherent pluggable product line. Packaged in OSFP800 and QSFP-DD800 form factor with several transmission modes, the Ciena WL6n plug can establish error free channels over extended distances. WL6n enables a wide range of applications from 800ZR metro Data Center Interconnect (DCI) to 400G long-haul. Based on 3nm CMOS and using Probabilistic Constellation Shaping (PCS) WL6n can achieve 800Gbps over distances greater than 1000km. For this demonstration at SC25, the WL6n gear would be deployed in the Ciena booth and connected to the Internet2 line system via SCinet. The channel would be looped in a Chicago data center and eventually terminate in Ciena booth on the showfloor. Ciena is expecting the signal to establish an 800Gbps channel over 1000-1100 km distance via the Chicago loop.

Goals

The objective of this demonstration is to establish a long haul 800Gbps coherent pluggable channel using Ciena WL6n over a distance >1000 km across an Internet2 line system, co-existing with live traffic. Ciena would be actively noise loading the WL6n channel with varying noise floor levels to demonstrate OSNR margin on the channel and effectiveness of Ciena's latest modem technology. Displayed at the Ciena booth will also be live symbol constellation graphs extracted from the plug.

Impacts

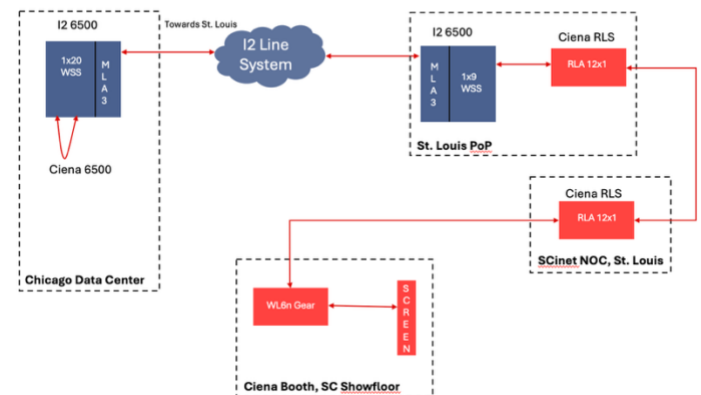
This demonstration showcases a new era in optical communication technologies with the advent of WaveLogic 6 Nano. This demonstration acts as a proof point for the effectiveness of Ciena's modem technology.

Ciena would look to extract field data from this unique proof of concept. SCinet's support in bringing this link up would be useful in demonstrating this technology along with its partners.

Resources

Please see topology attached. Ciena is working with its partners, Internet2 and SCinet to allocate the relevant resources for this demonstration. At the show floor, Ciena would require a dark fiber pair directly connected to the Ciena RLS (RLA 12x1 switch port) terminating on the Ciena booth. Internet2 will provide the line system and spectrum. Ciena booth will host all the necessary gear including noise loading apparatus, test sets, evaluation boards etc.

Proposed Topology



Involved Parties

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