



# AMS-IX Update

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# The Facts

- Internet exchange based in Amsterdam
- Non-profit organization
- 7 co-locations
- Brocade hardware
- 350 members
- 613 ports
- 944 Gb/s traffic peak



# Locations

- SARA
- NIKHEF
- Telecity 2
- GlobalSwitch
- EuNetworks (added end of 2007)
- Equinix (added end of 2008)
- Interxion (added end of 2009)

# New Locations

- Telecity 4
  - Planned as satellite site from Telecity 2
  - Launch estimated for June 2010
- Terramark AMS
  - Full deployment
  - If compliant with our datacenter standard
- AMS-IX datacenter standard:  
<http://www.ams-ix.net/co-locations/>

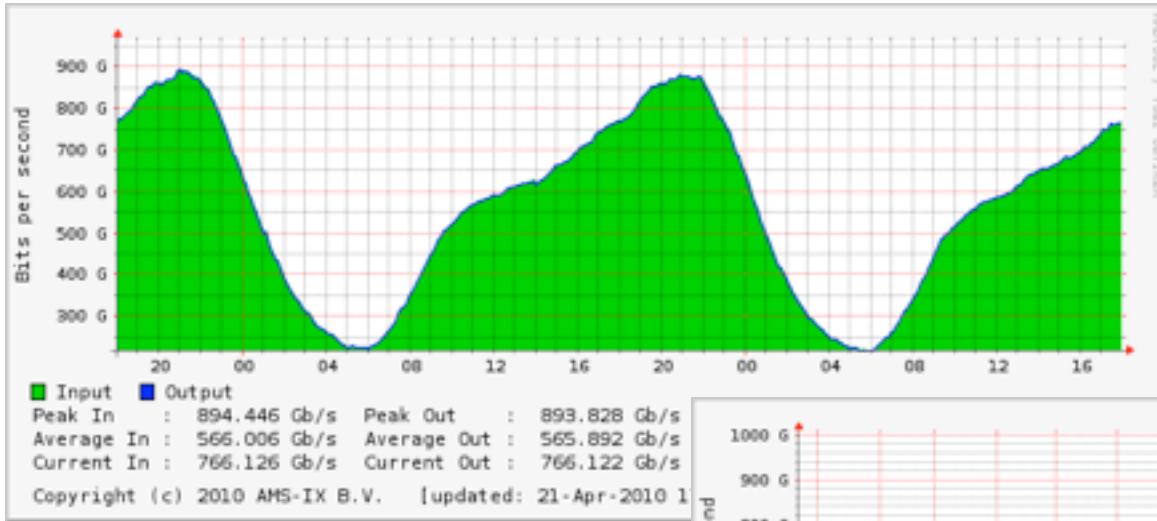
# Pricing

- 1 Gbit  
(1000BaseSX, 1000BaseLX, 1000BaseLH)  
– 500 Euro / Month
- 10 Gbit  
(10000BaseLR, 10000BaseER)  
– 2000 Euro / Month  
➔ 1750 Euro / Month from July 1st 2010
- 100 Mbit (100BaseTX) not available anymore

# AMS-IX Reseller Ports

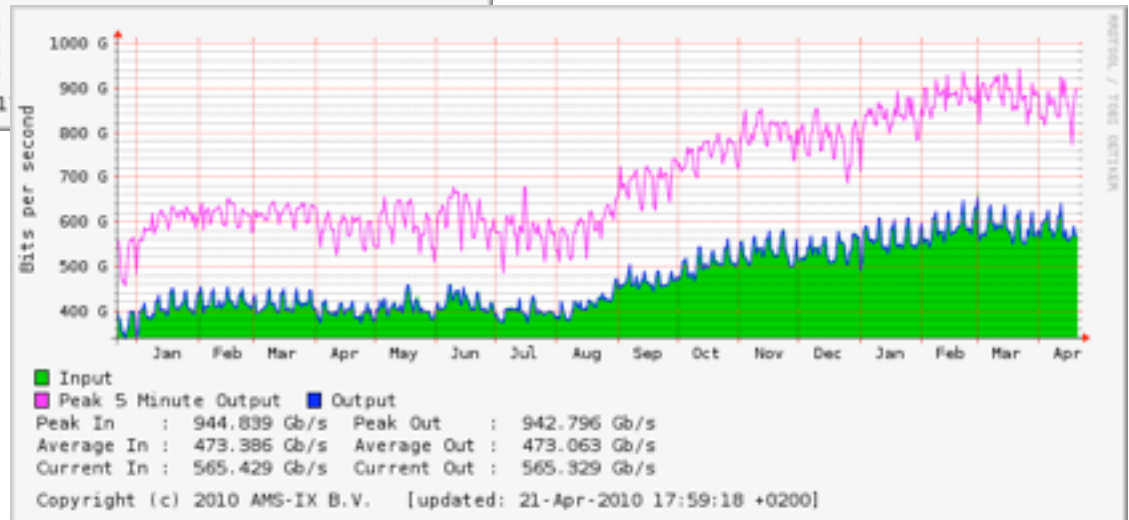
- Relaunch of AMS-IX Partner Program
- Allows to re-sell AMS-IX ports as part of own portfolio
- 10GE ports allowing multiple MAC addresses in different VLANs
- Customers connects at remote partner location

# Traffic

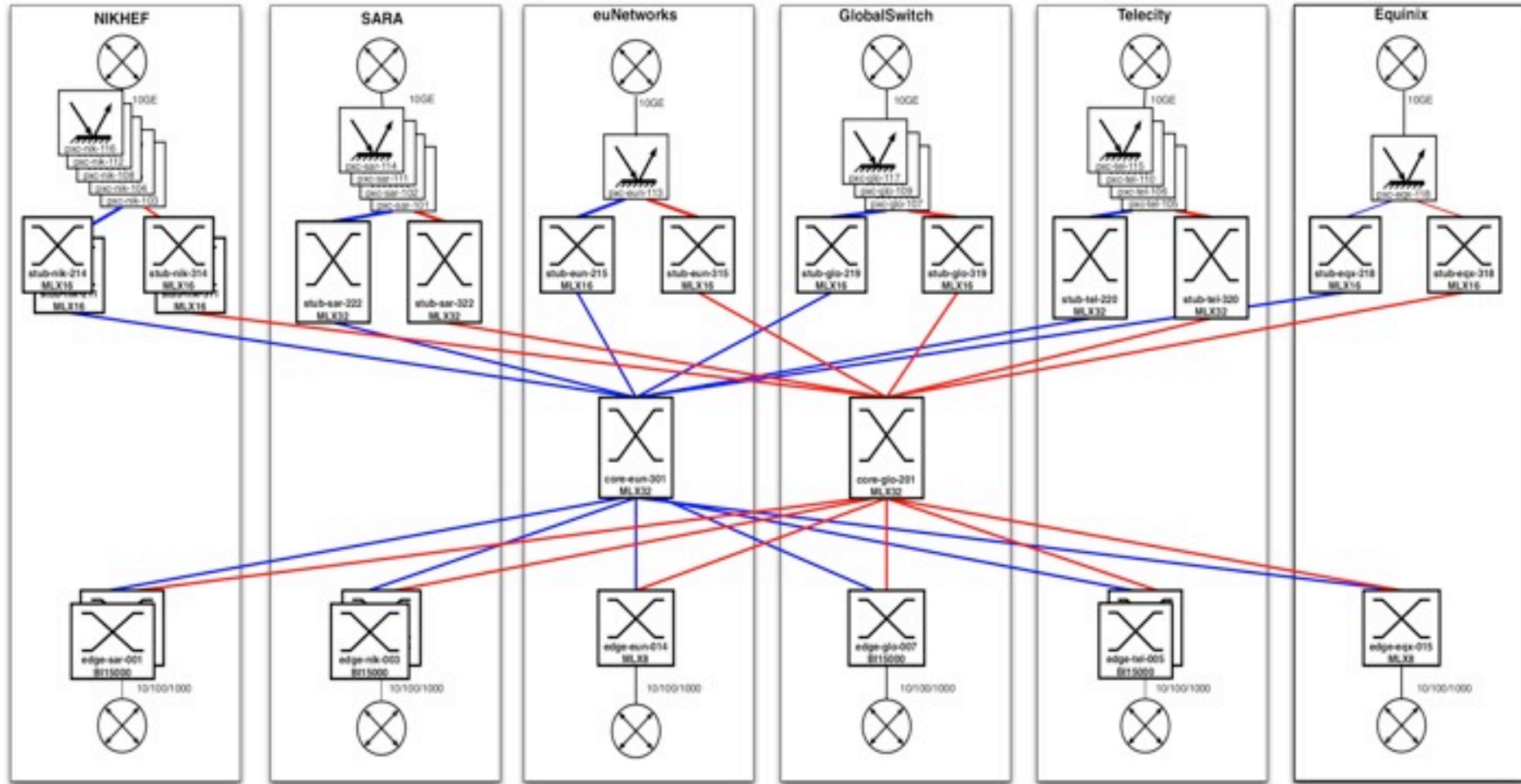


- 944 Gbps peaks

- 1 Tbps expected soon!



# Previous Topology





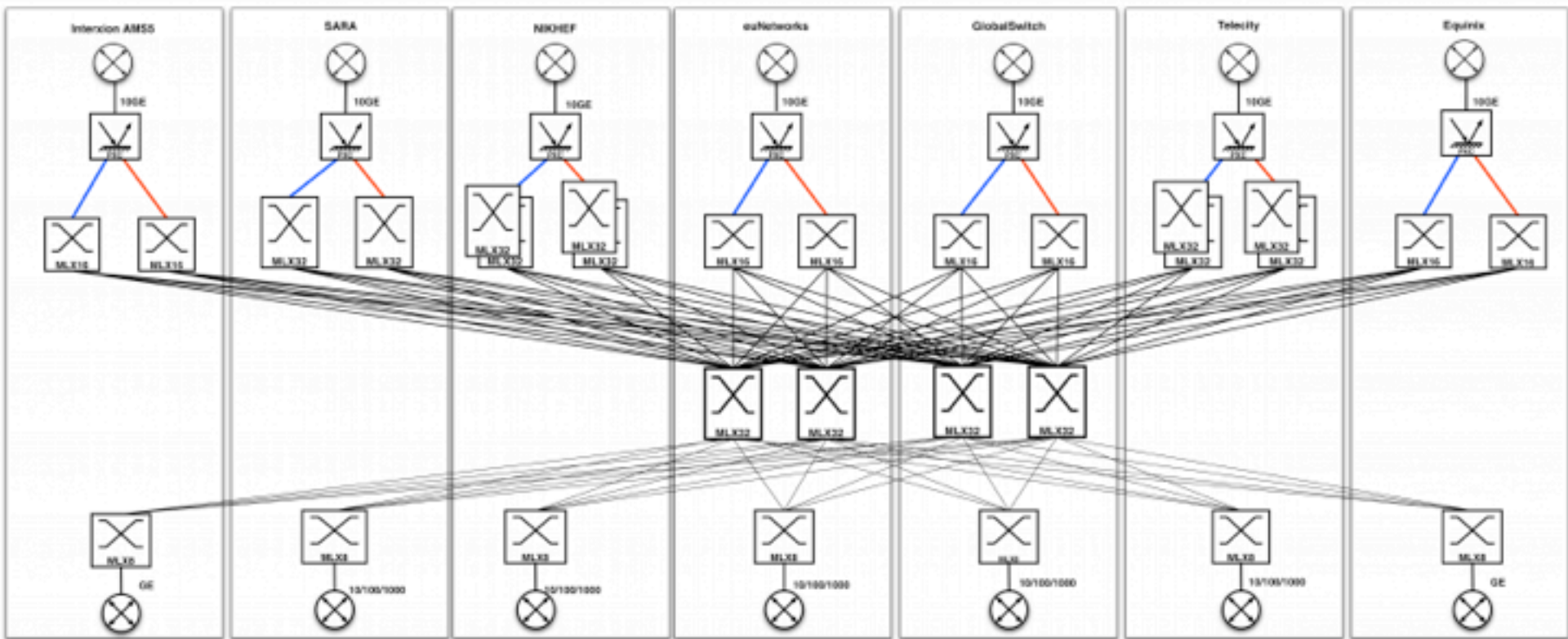
# Previous Topology

- Double star topology
  - One active, one backup
- Loop prevention with VSRP on the lower edge
- 10 GE edge resilient connected via Glimmerglass photonic switches (PXC's)
- Fail overs between the topologies with VSRP and a software developed at AMS-IX managing the PXC's

# Limitations

- Port density on the core switch
  - 128 \* 10 GE ports utilized
- Port density on the edge switches
  - Higher demand for 10GE ports
  - Additional edge switches bring less local switching
  - Larger inter switch aggregates needed
- Platform fail-overs introduce link-flap on all 10GE customer ports

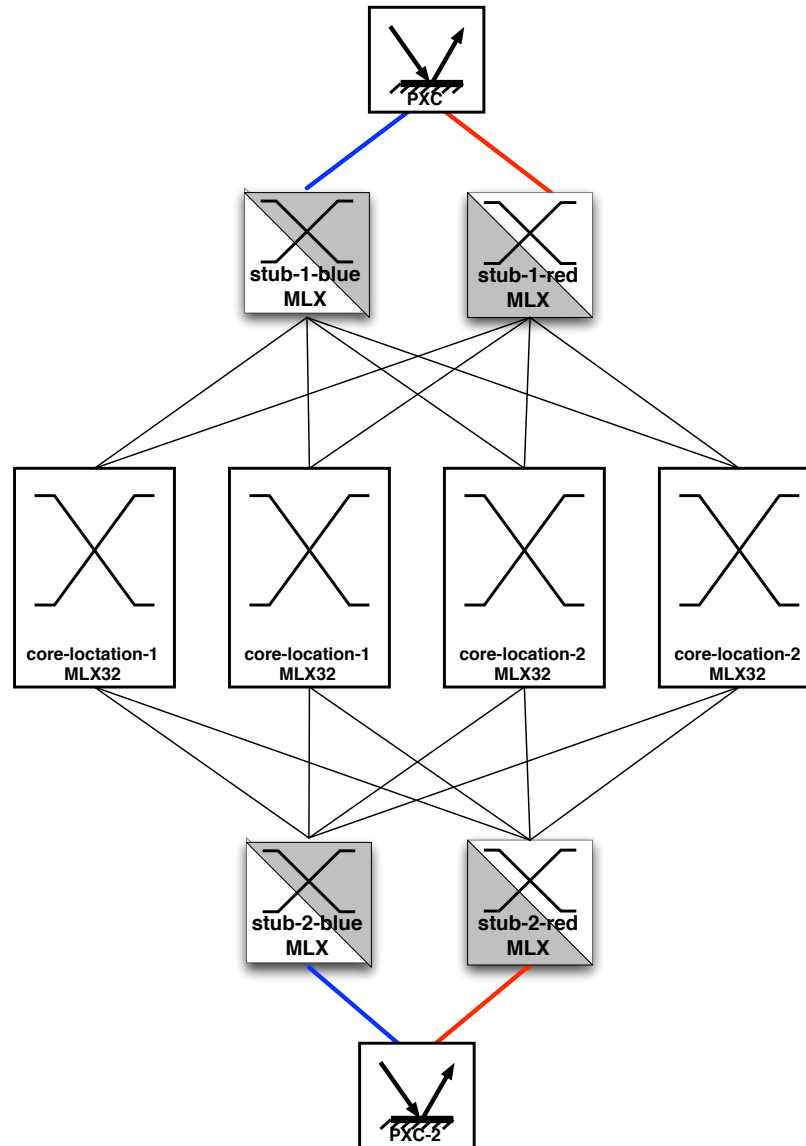
# New Topology



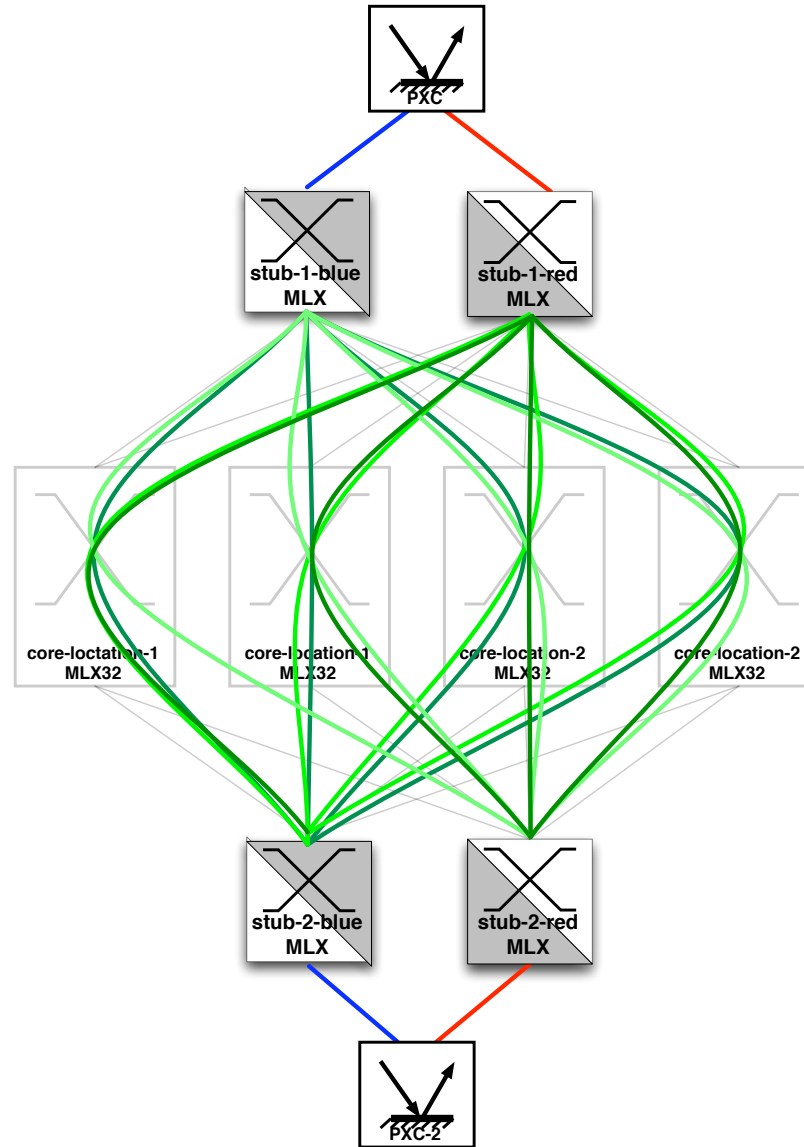
# New Topology

- One MPLS/VPLS-based peering platform
- Additional core switches, traffic load balanced
- Retain redundancy by providing double of the required capacity
- Retain 10GE edge resilience by using PXC's

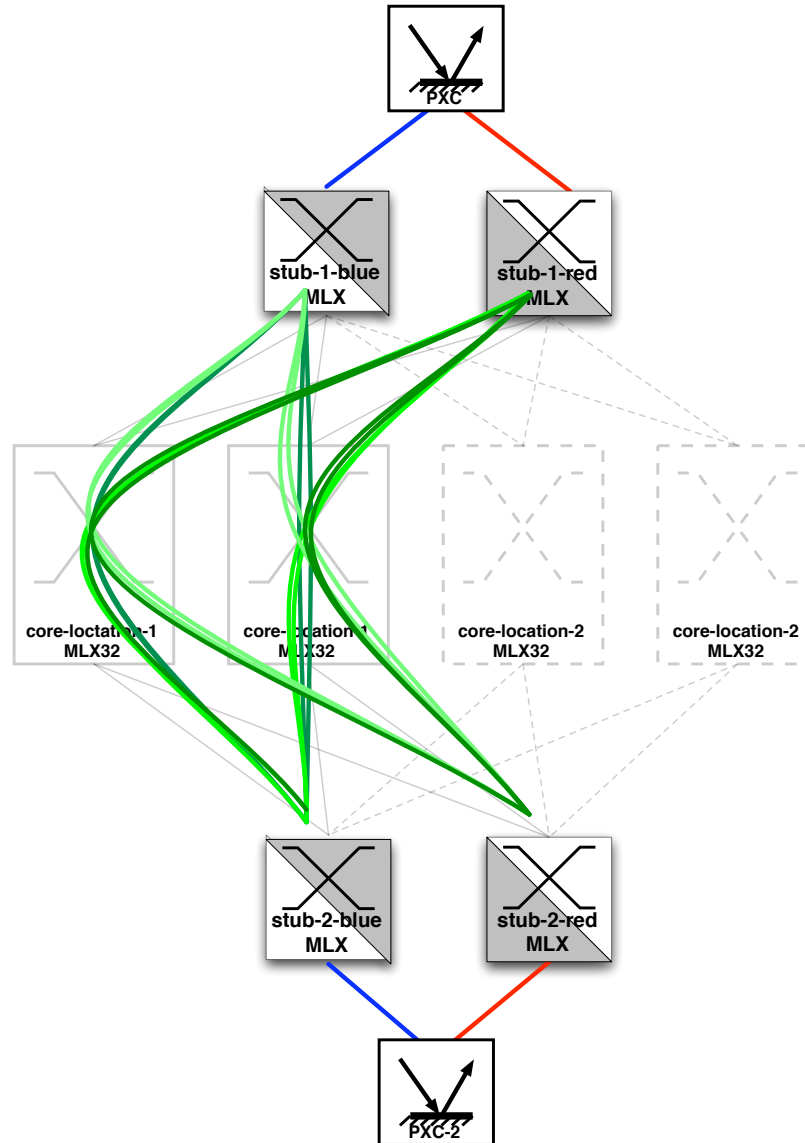
# VPLS Setup - Layer 1



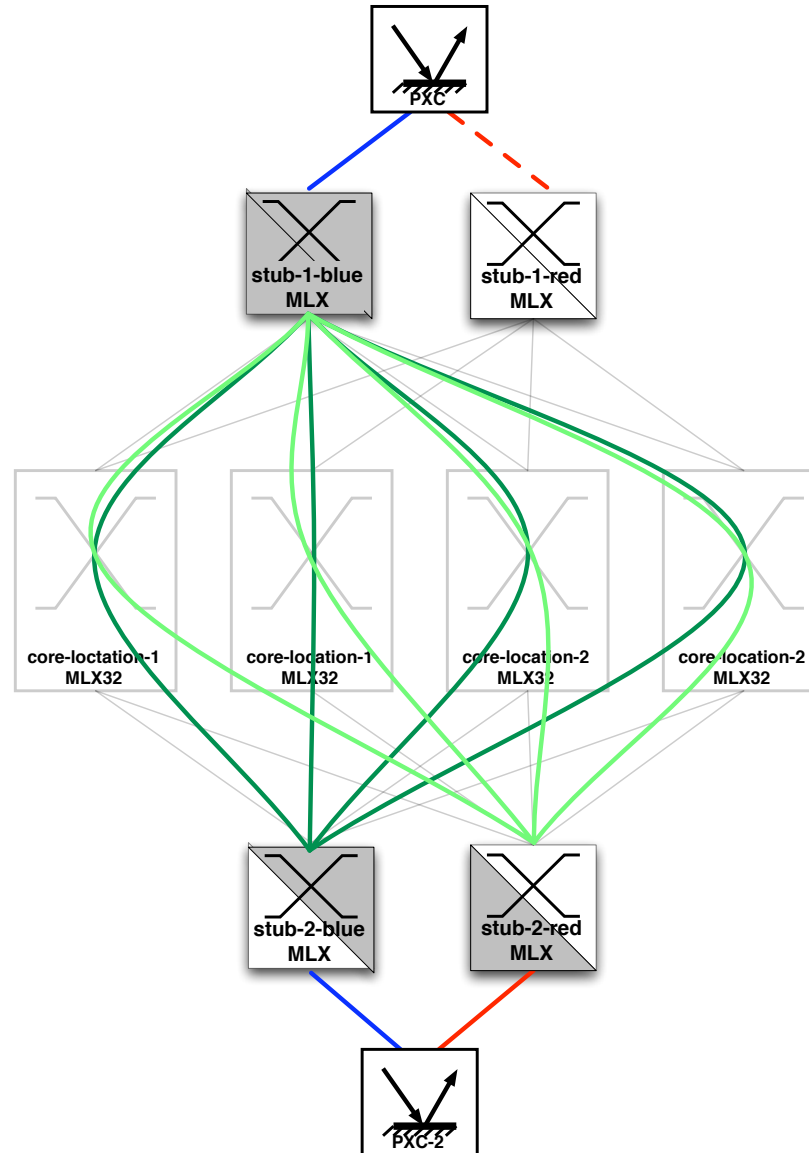
# VPLS Setup - LSPs



# VPLS Setup - Core Failure



# VPLS Setup - PE Failure





# Active DWDM

- Higher density blades will be based on SFP+
- No SFP+ DWDM optics
- Active DWDM equipment for metro connections
- Selected MRV as supplier

# Route Servers

- Involved with Euro-IX Route Server Working Group
- Two fairly stable OpenBGPD route servers
- Adding BIRD based route server in 2010



**Thanks for listening!**  
**Questions ?**

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