

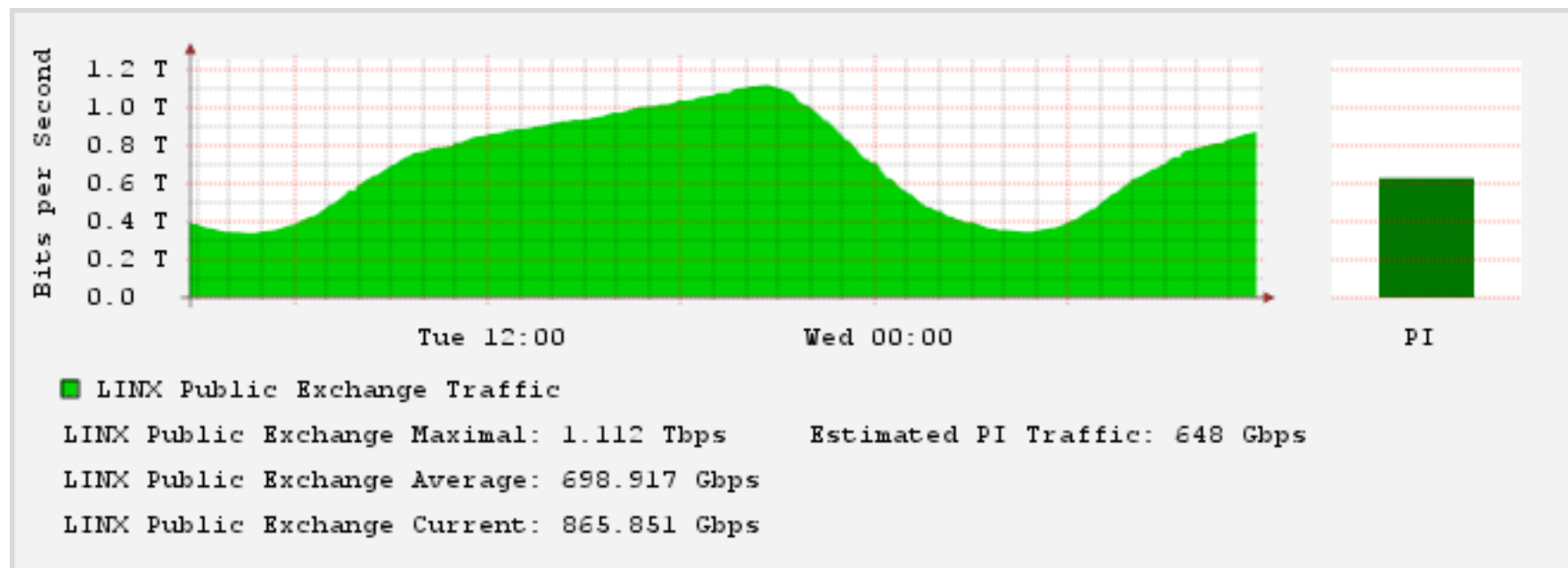
# The London Internet Exchange

Bartek Raszczyk  
Senior Network Engineer

*Krakow, 2011*

# Total LINX Traffic

‘Day’ graph (5 Minute Average)



Over **1,7** Tbps of traffic on PI  
and peering LANs!

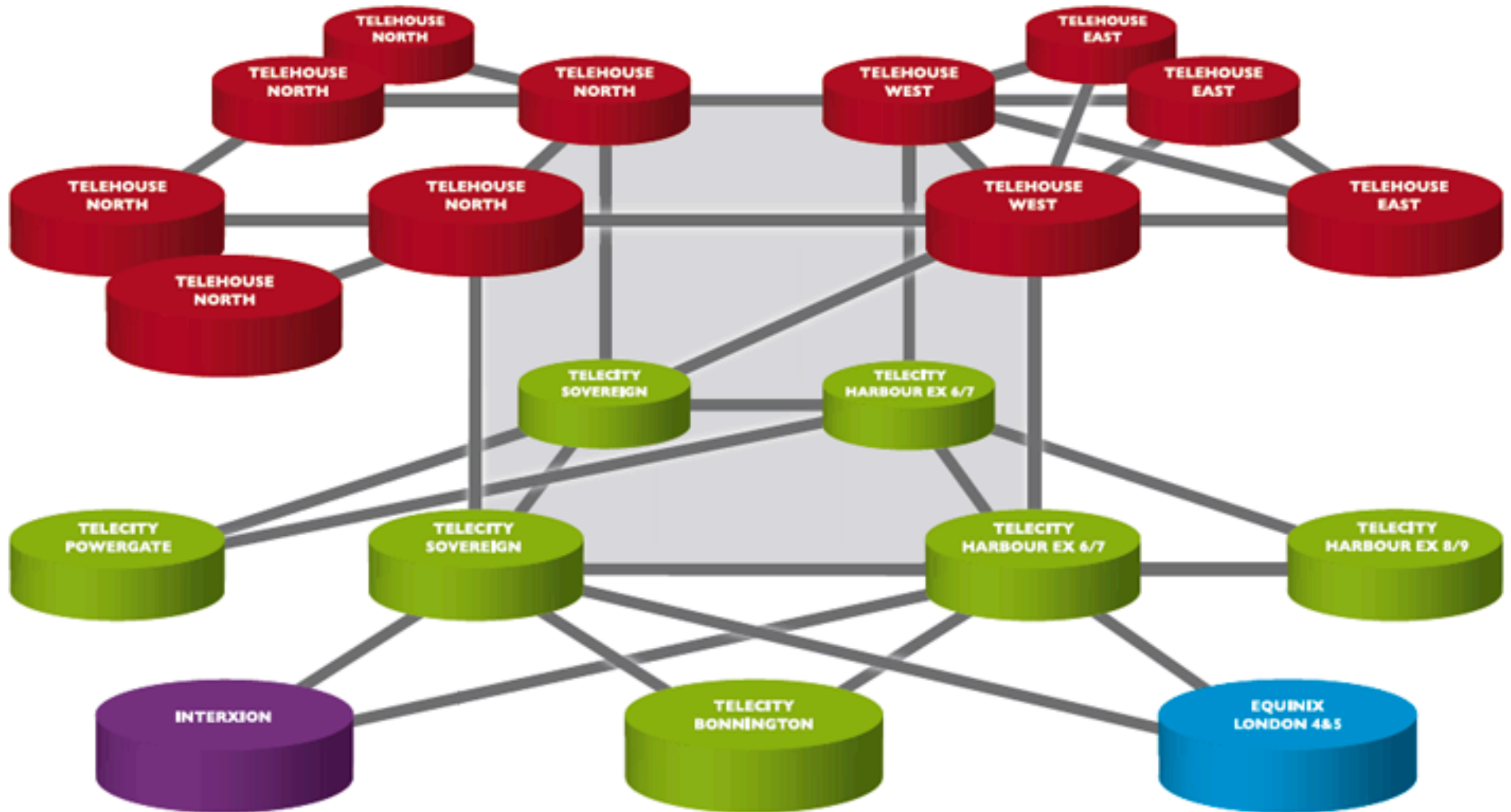
# LINUX in numbers...

- 37 new applications in 2011
- 388 members from 51 countries
- 851 member-facing ports (367 x 10GE)
- over 1,1 Tb/sec of peak traffic
- 318.000 routes (54.000 on RS)

# Architecture Refresh

- ring architecture does not scale well  
(not with 32x10Gbps) - you end up with lots of (expensive) idle resilience
- high-density (>256\*10GE) switches are rare and expensive commodity
- layer2 networks can't cope with IXP member requirements anymore...
- ... so we decided to try something new!

# ...enter the CUBE!



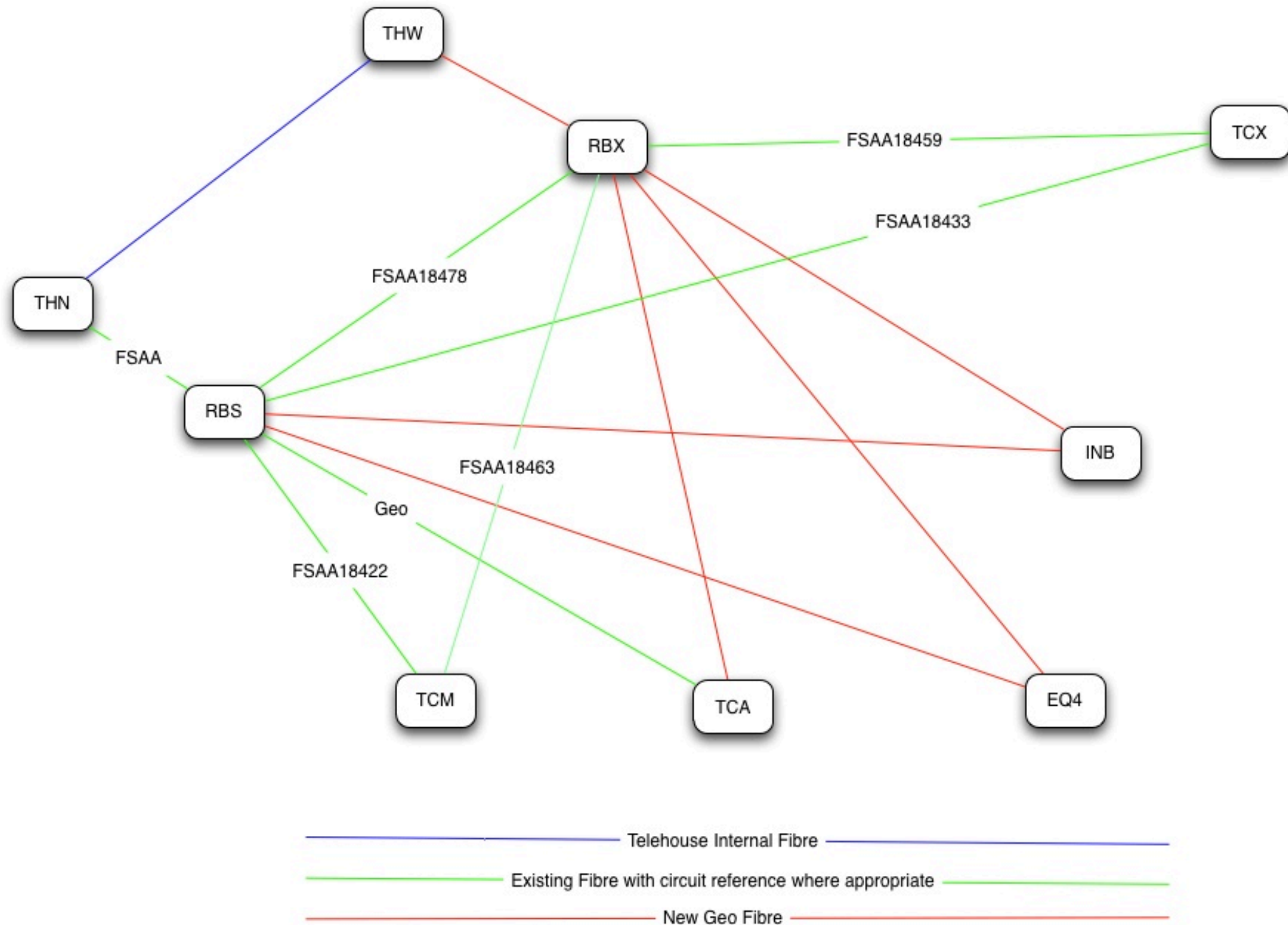
# How did we come to this design?

- series proof-of-concept exercises with leading vendors
- LINX membership consultations
- we've worked closely with vendor's design team on the final architecture

# What have we actually build?

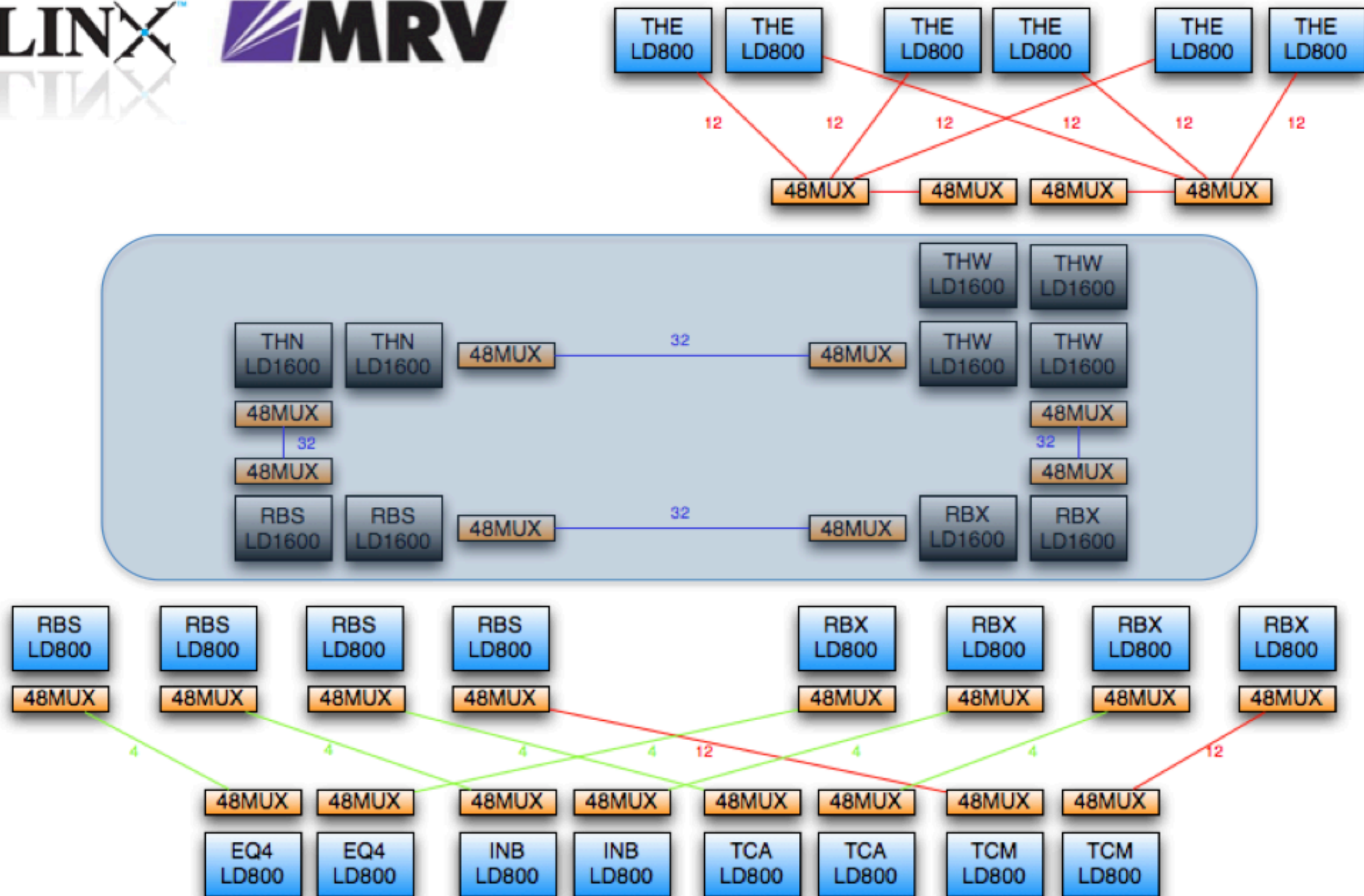
- dark fibre  
diverse routes from various providers
- optical transport  
active dwdm system across sites
- management  
j-series router in each site
- peering LAN  
mpls/vpls based architecture

# Dark fibre map

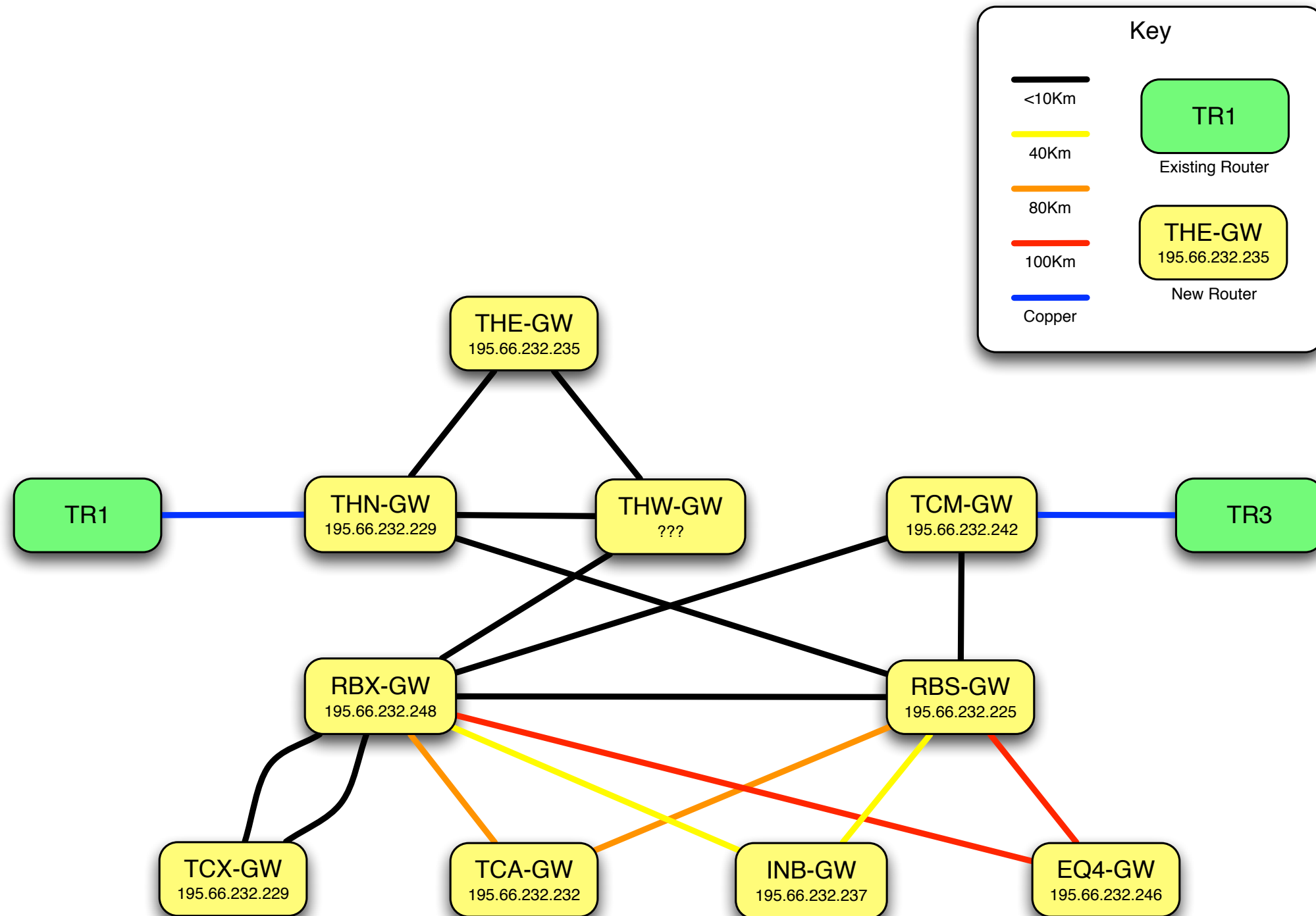




# Optical Transport



# Management Network

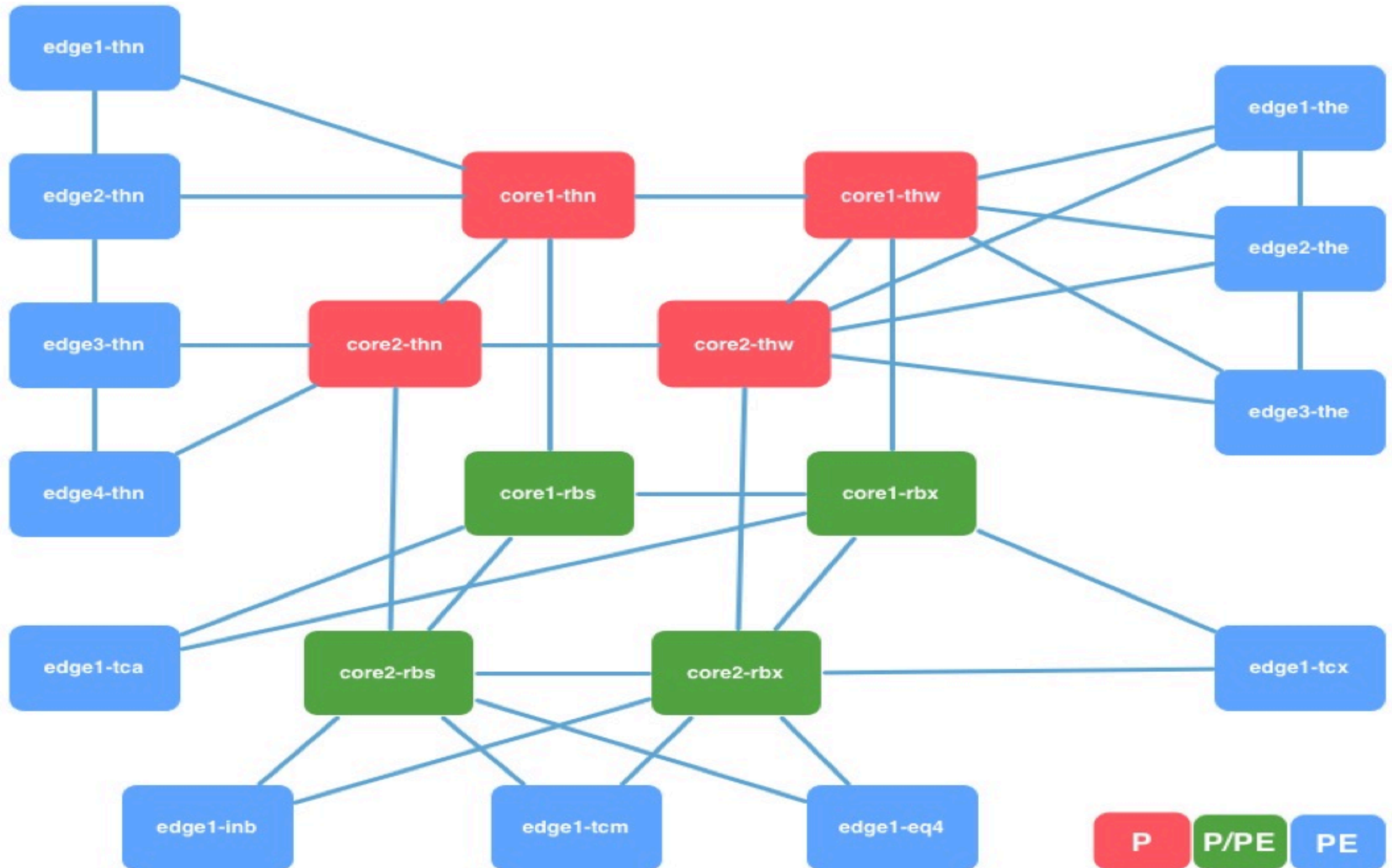


# NEW Peering LAN

## Two phases

- Phase 1 (in deployment now)  
juniper mx-960 in the core and mx-480's  
at edge sites
- Phase 2 (2012)  
juniper PTX in the core, T-4000 or QFabric  
considered for more dense sites

# NEW Peering LAN



# Reseller Programme

- shared 'fractional' ports
- connected via vLANs
- launching later this year (Q4)
- please contact [joinhelp@linx.net](mailto:joinhelp@linx.net) for more details

# Dziękuję!

[bartek@linx.net](mailto:bartek@linx.net)