



# Infrastructure overview

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# Web infrastructure

- Traffic served in 42 countries
- Daily average
  - 40 billion HTTP requests
  - 25 billion Real-Time Bidding requests
  - Over 2.5 billion unique banners
- Peak numbers (per second)
  - 700,000 HTTP requests
  - 350,000 RTB requests
  - **25,000** banners

Google : 2M searches / minute = 33K searches / second

Facebook : 680K posts / minute = 11K posts / second

Twitter : 100K tweets / minute = 1666 tweets / second

(<http://mashable.com/2012/06/22/data-created-every-minute>, June 2012)

Amazon S3 : peak at 800,000 requests per second (AWS blog, 29/11/2012)



# HPC infrastructure

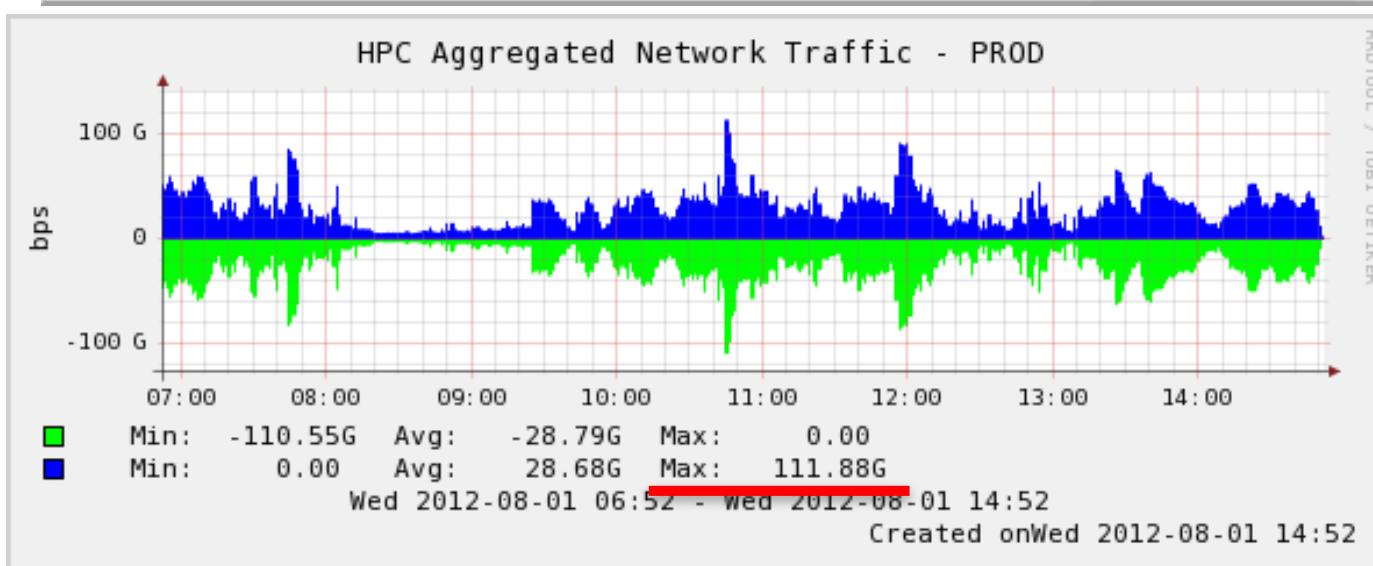
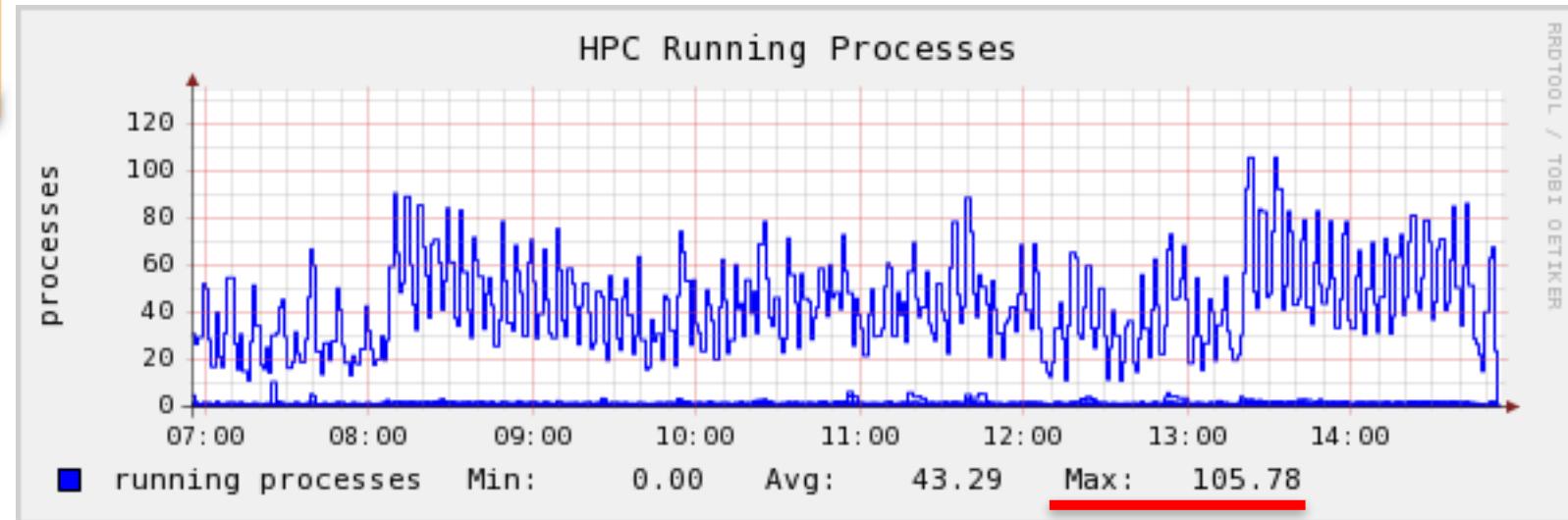
- Cluster live since June 2011 (Paris datacenter)
- 2000 cores, 2PB storage (+1PB for long-term archival)



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# HPC at work: 100+ jobs, 100+ Gb



# Datacenters

- No outsourcing, no CDN, no cloud, no virtualization
- Criteo infrastructure is 100% designed, built and run in-house
- Availability: > 99.95%
- 6 datacenters
  - Paris (Equinix): 40 racks (+30)
  - New York (Telx): 28 racks (+72)
  - Sunnyvale (Equinix): 26 racks (+48)
  - Tokyo (NTT): 24 racks (full)
  - Amsterdam (*Telecity*): 120 racks
  - Tokyo (NTT): 56 racks
- Hardware
  - Servers: HP
  - Network: Cisco
  - Load balancers: F5
  - Storage: Isilon



# It's not only about hardware



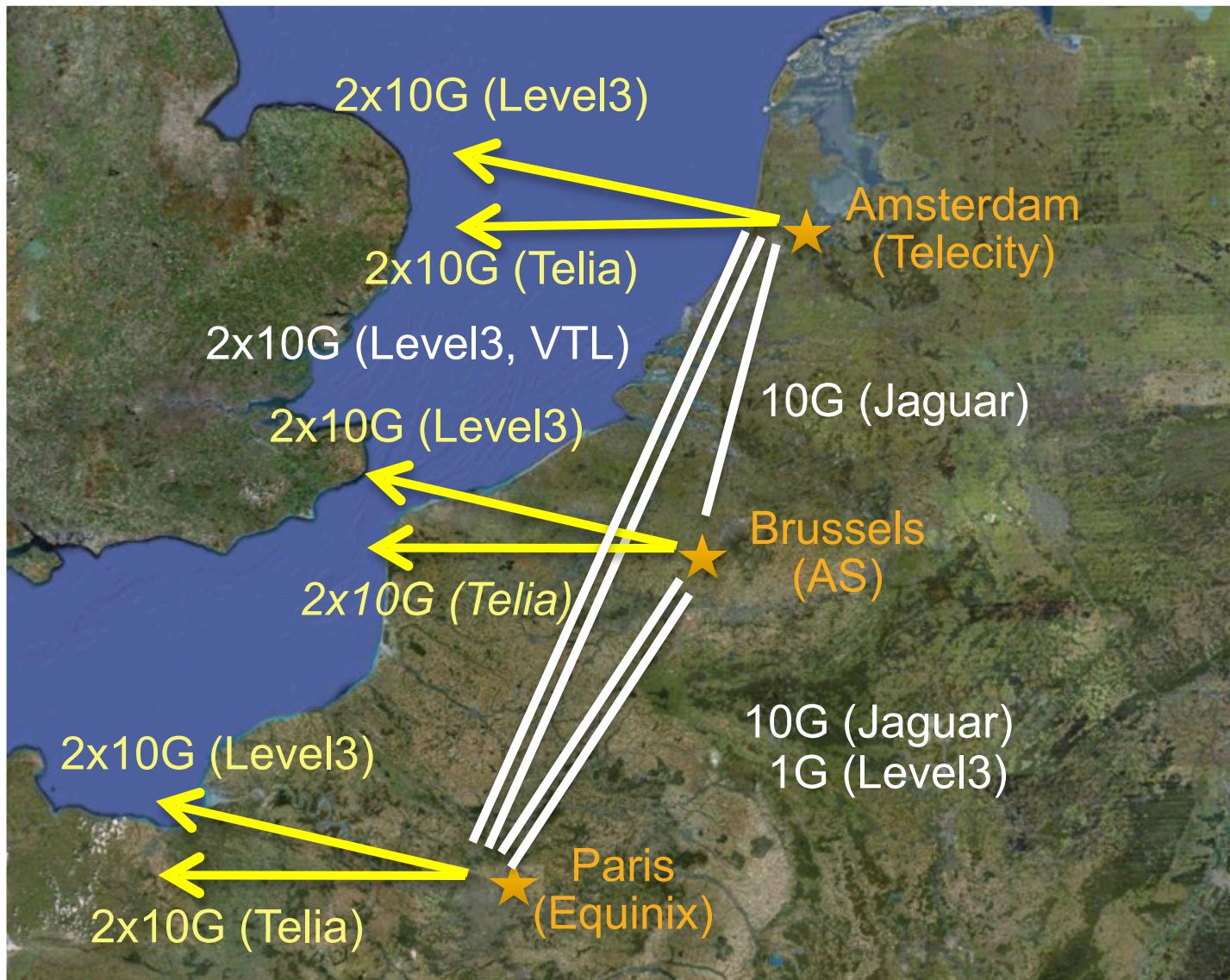
Their way



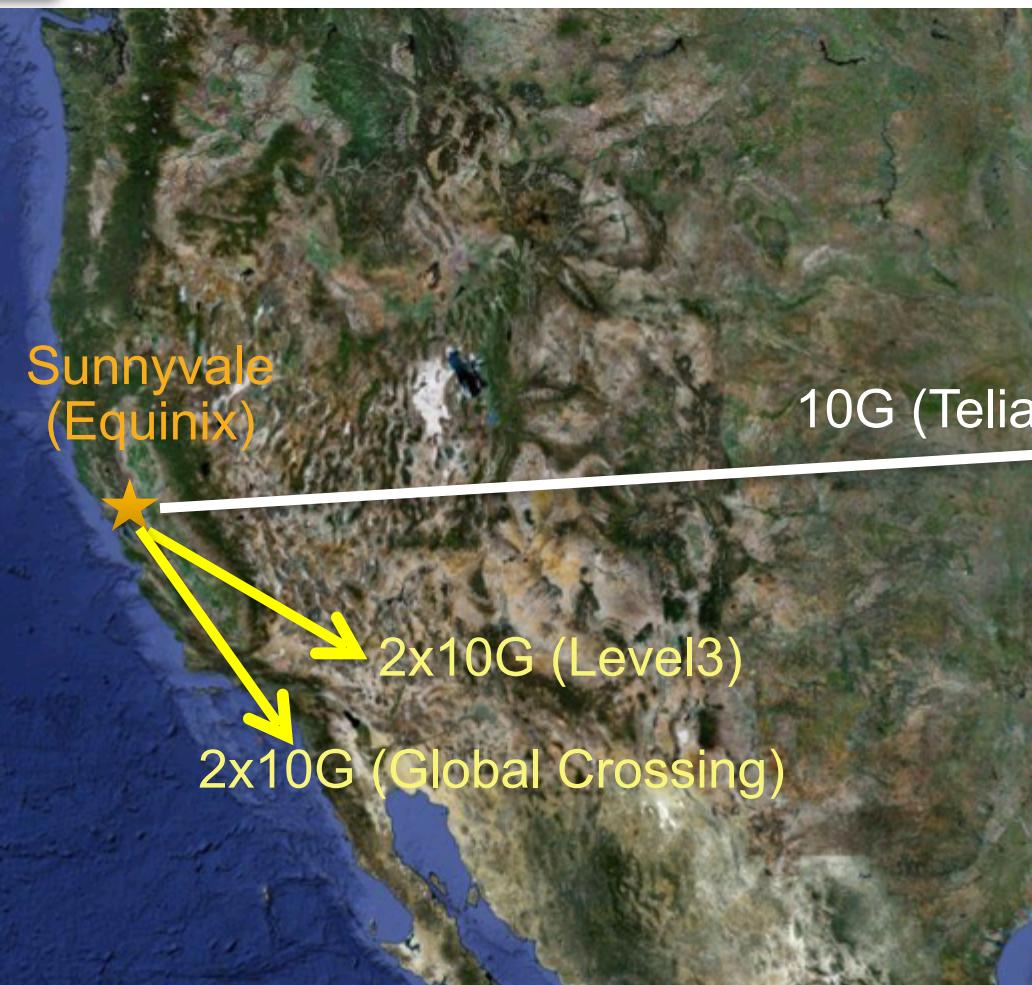
Our way

- DC skills
- Inventory
- Cabling
- Capacity planning
- Procurement
- Deployment
- Monitoring
- On-duty 24/7/365
- Attitude!

# Europe: 3 data centers



# Americas: 2 data centers



NYC  
(Telx)

10G (Telia)

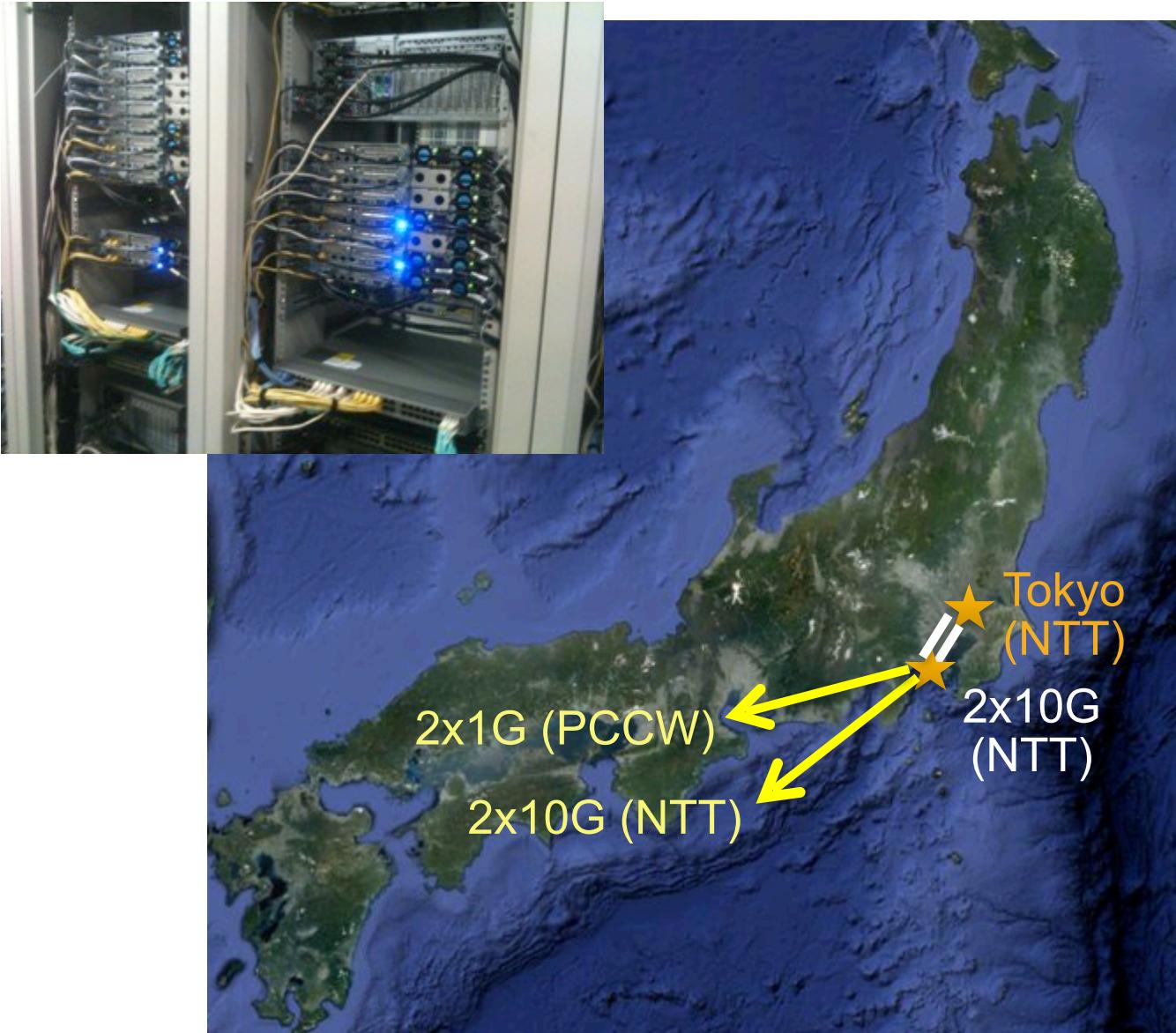
2x10G (Level3)

2x10G (Global Crossing)

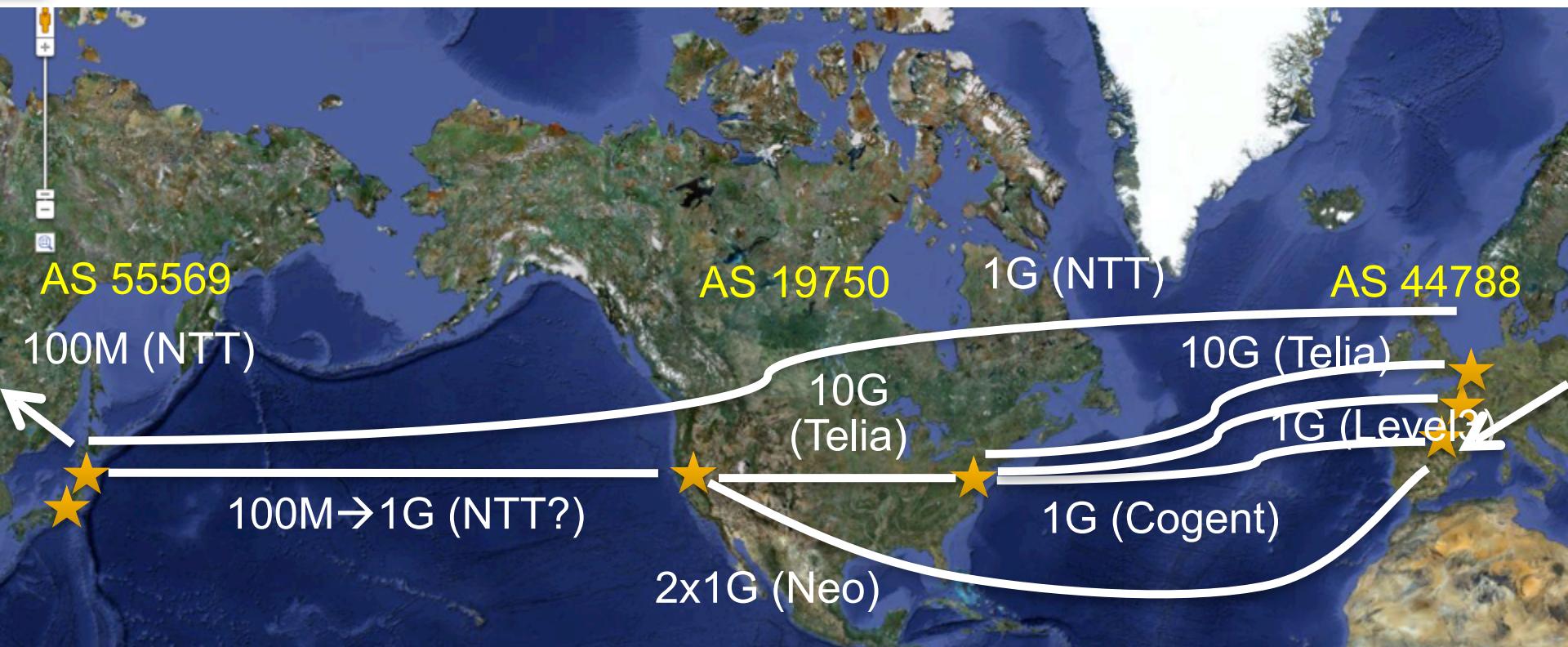
2x10G (Global Crossing)

2x10G (Level3)

# Asia Pacific: 2 data centers



# Global network



# Peering

- Present on 9 IXs, +/- 400 peering sessions
- Private peerings ★



# Thank you !



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# Where next?

