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# Internet Networks in Europe

an overview of

**Internet Geography,  
Regulation,  
Traffic Exchange,  
Infrastructure and  
Major Players.**

by

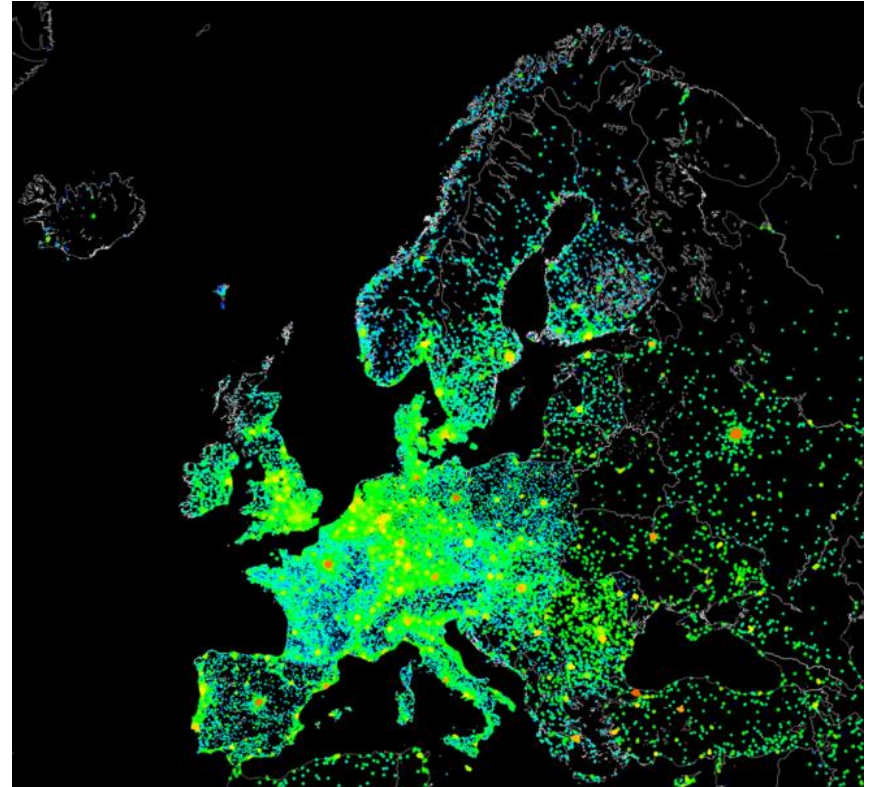
**Teresa Wan – Sales Director – Singapore Office  
Francois Lemaigre – Sales VP - EMEA**

# Europe – Internet Geography

**High broadband Internet penetration**

**Many countries, many languages**

**Gateway between North America and Africa / Middle-East**



# Europe – Internet Regulation

**DGCONNECT, BEREC and NRA's**

**National Champions in most countries, but no pan-European "champion"**

**Each Internet subscriber generates about 500 kbps interconnection traffic,  
50% peering / 50% transit\***



\*Source: Arcep, 2019 – in France at the end of 2018, 29 million subscribers generated 14 Tbps incoming traffic  
[https://www.arcep.fr/uploads/tx\\_gspublication/rapport-etat-internet-2019-270619.pdf#page=27](https://www.arcep.fr/uploads/tx_gspublication/rapport-etat-internet-2019-270619.pdf#page=27)

# Europe – Internet Traffic Exchange

**Local traffic, Transit traffic**

**Distributed traffic exchange**  
216 IXPs, 49 countries, 176 cities,  
465 locations\*

**A handful of core hubs**  
London, Amsterdam, Frankfurt

**A few core gateways**  
North: UK / Ireland  
South: Marseille, Italy, Spain,  
Portugal



\* Source: Euro-IX, 2019

Source: Cogent, 2019

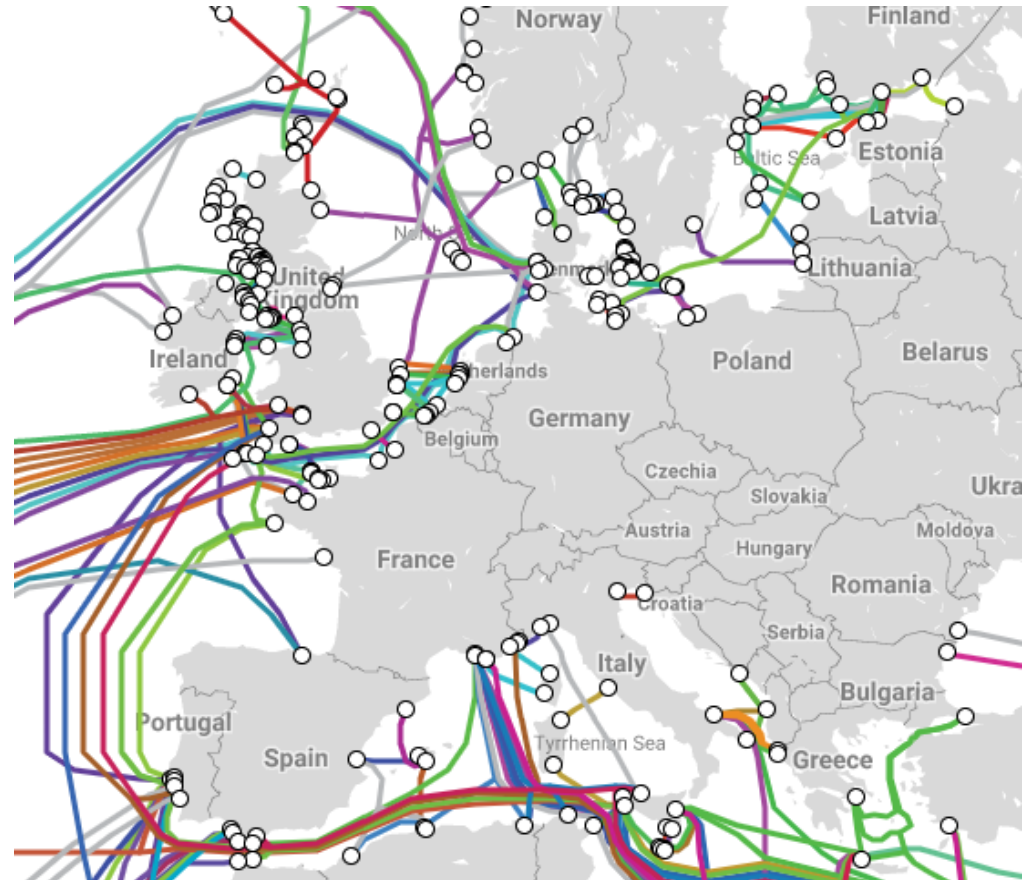
# Europe – Internet Infrastructure

## Submarine Cables

North America, Canada, Iceland,  
Baltics.  
Africa, Middle-East, Asia

## Terrestrial

Between European countries



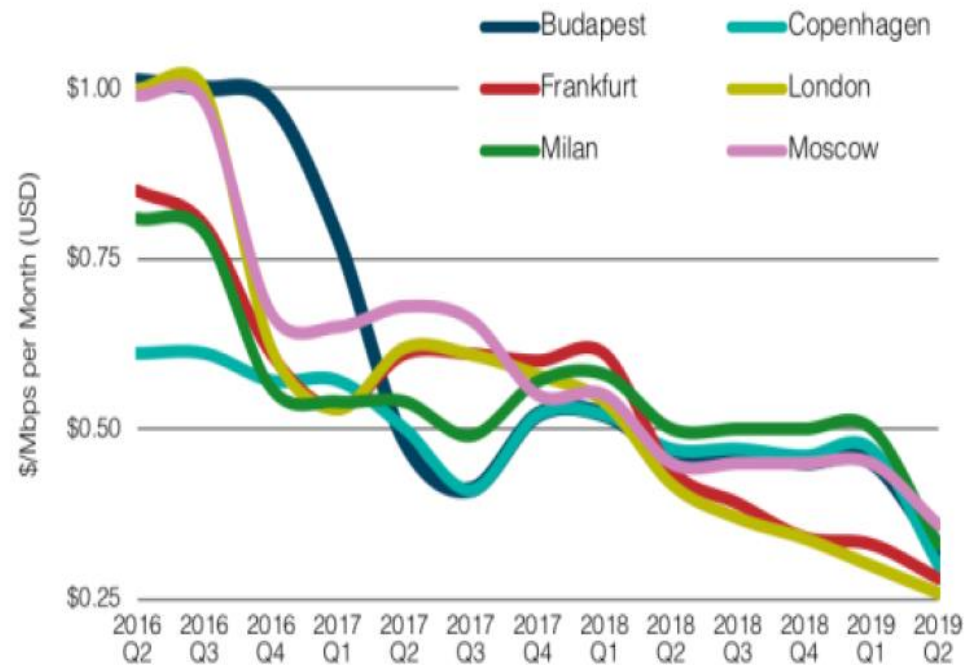
Source: Telegeography, 2019

# Europe – Internet Major Players

**Most competitive IP  
Transit market**

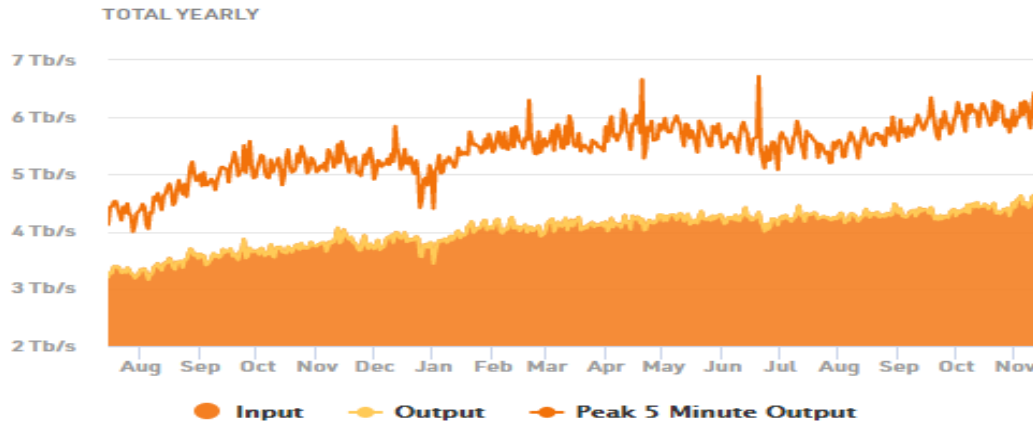
**Price declines  
need to be offset by  
Volume increases**

Weighted Median 10 GigE IP Transit Prices in Europe, Q2 2016-Q2 2019



Source: Telegeography, 2019

# Major Players: AMSIX and DECIX



PEAK IN  
**6.732** Tb/s

PEAK OUT  
**6.72** Tb/s

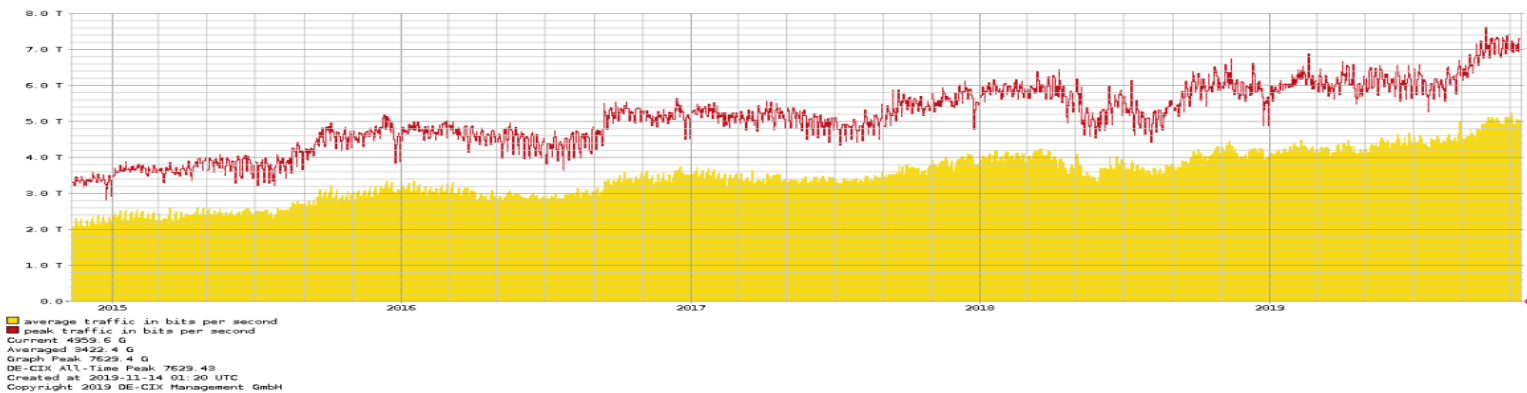
AVERAGE IN  
**4.015** Tb/s

AVERAGE OUT  
**4.013** Tb/s

CURRENT IN  
**4.473** Tb/s

CURRENT OUT  
**4.473** Tb/s

## 5-year graph

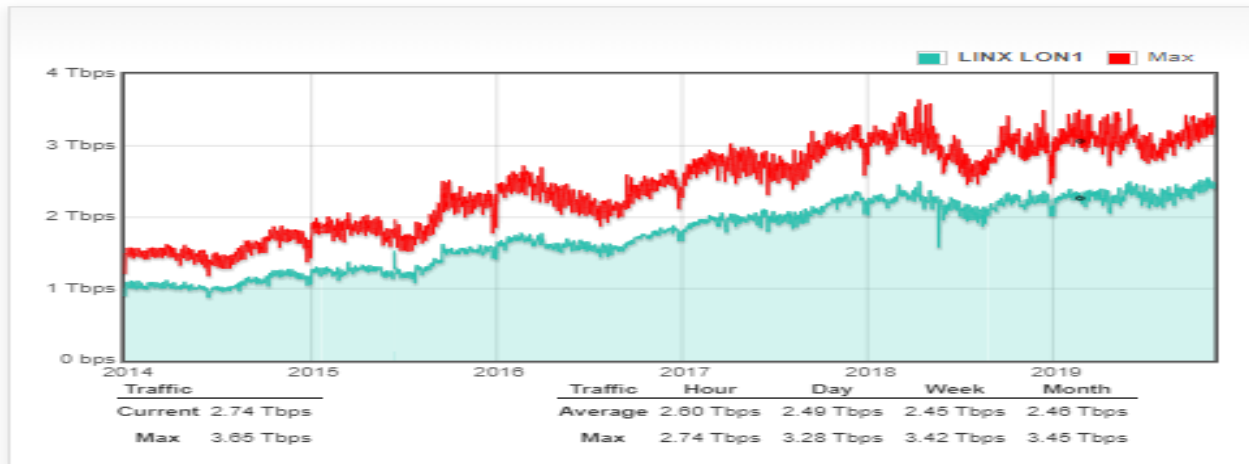
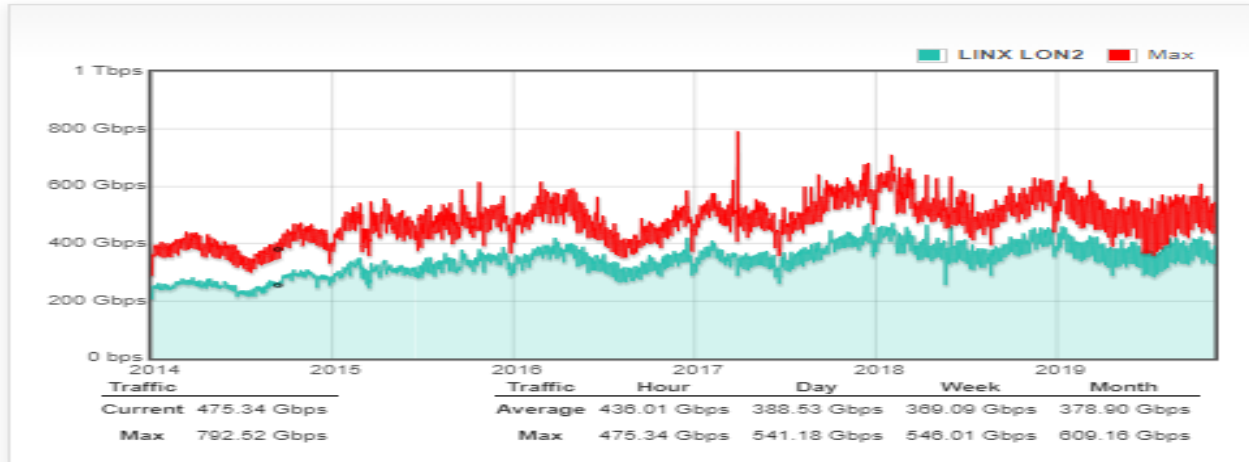


<https://www.ams-ix.net/ams/documentation/total-stats>

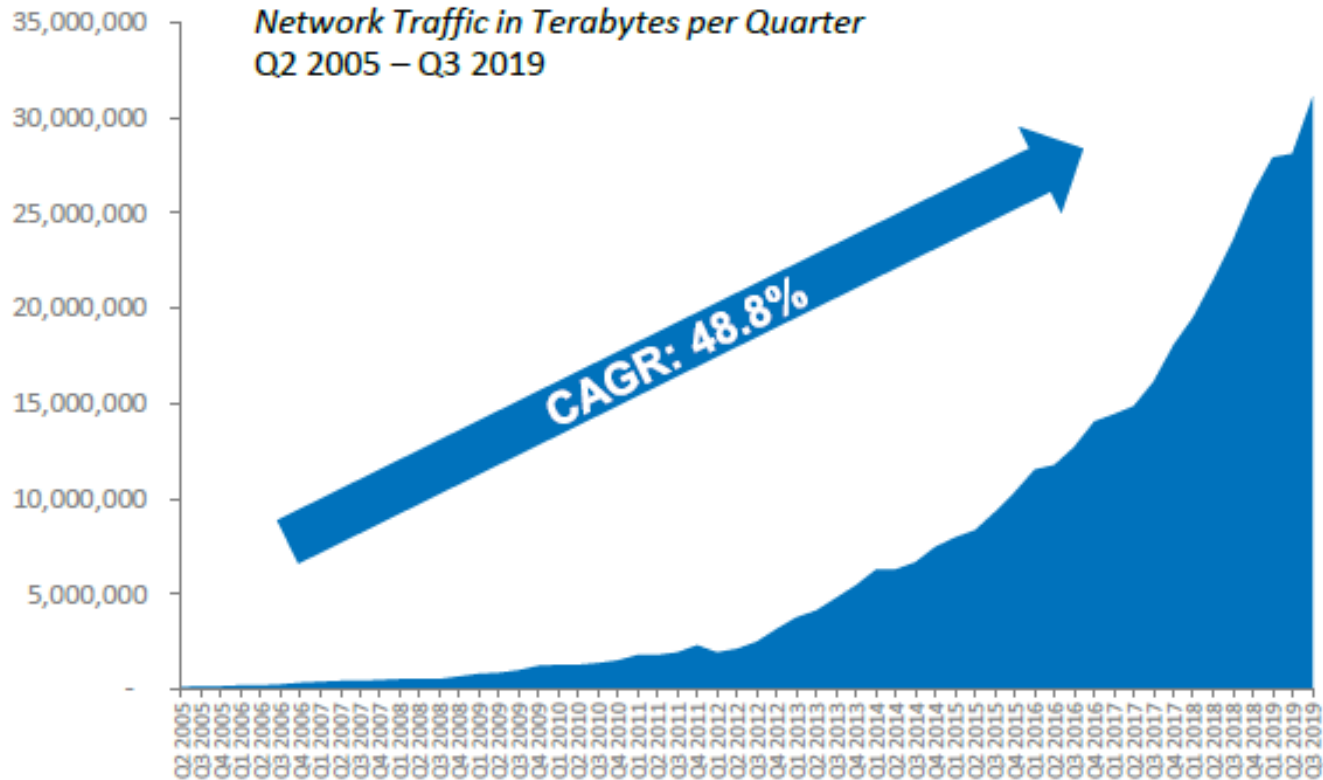
<https://www.de-cix.net/en/locations/germany/frankfurt/statistics>



# Major Players: LINX



# Major Players – Transit Cogent -



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