

INEX Operations Update September 2022

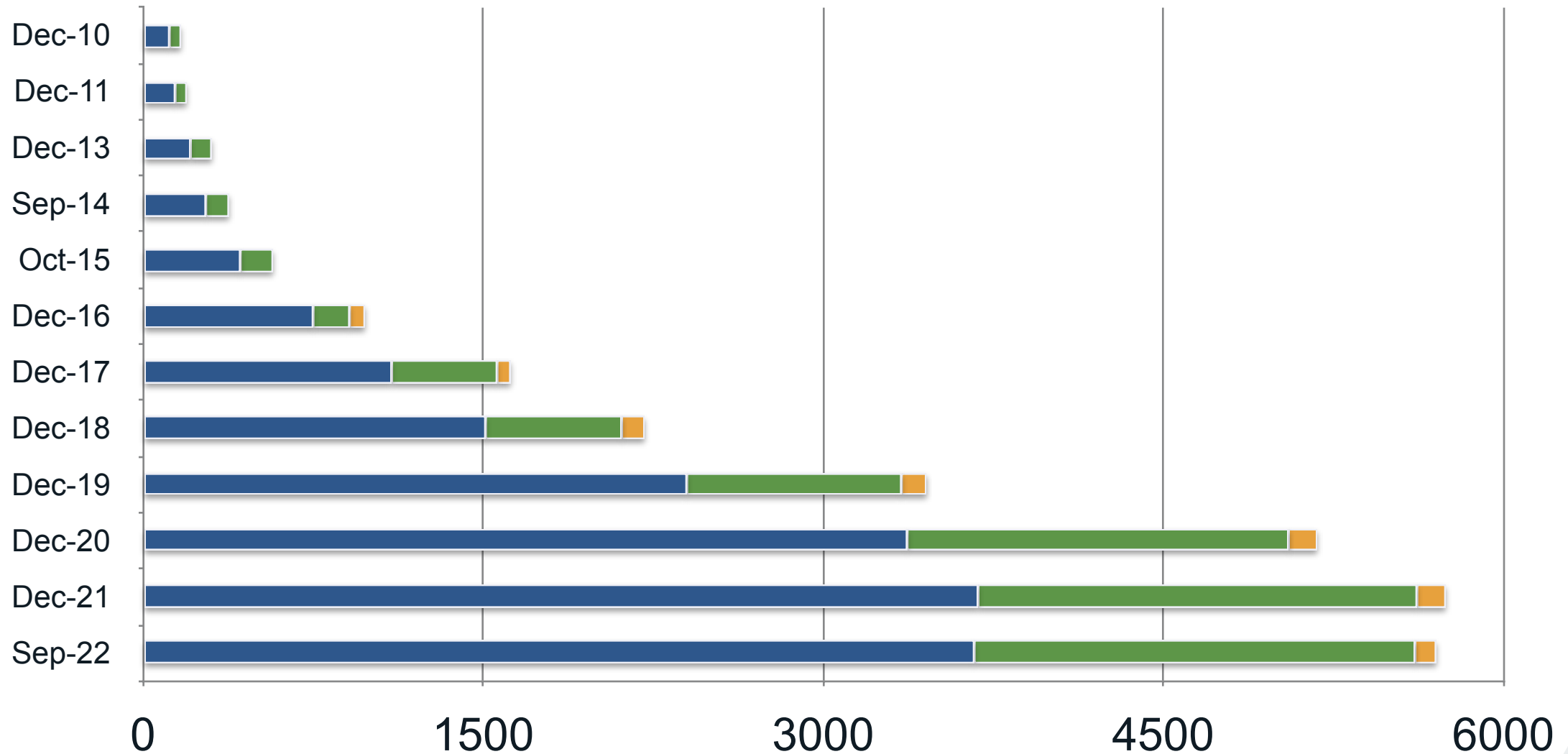
Barry O'Donovan
INEX Members' Meeting
September 22nd, 2022, Dublin



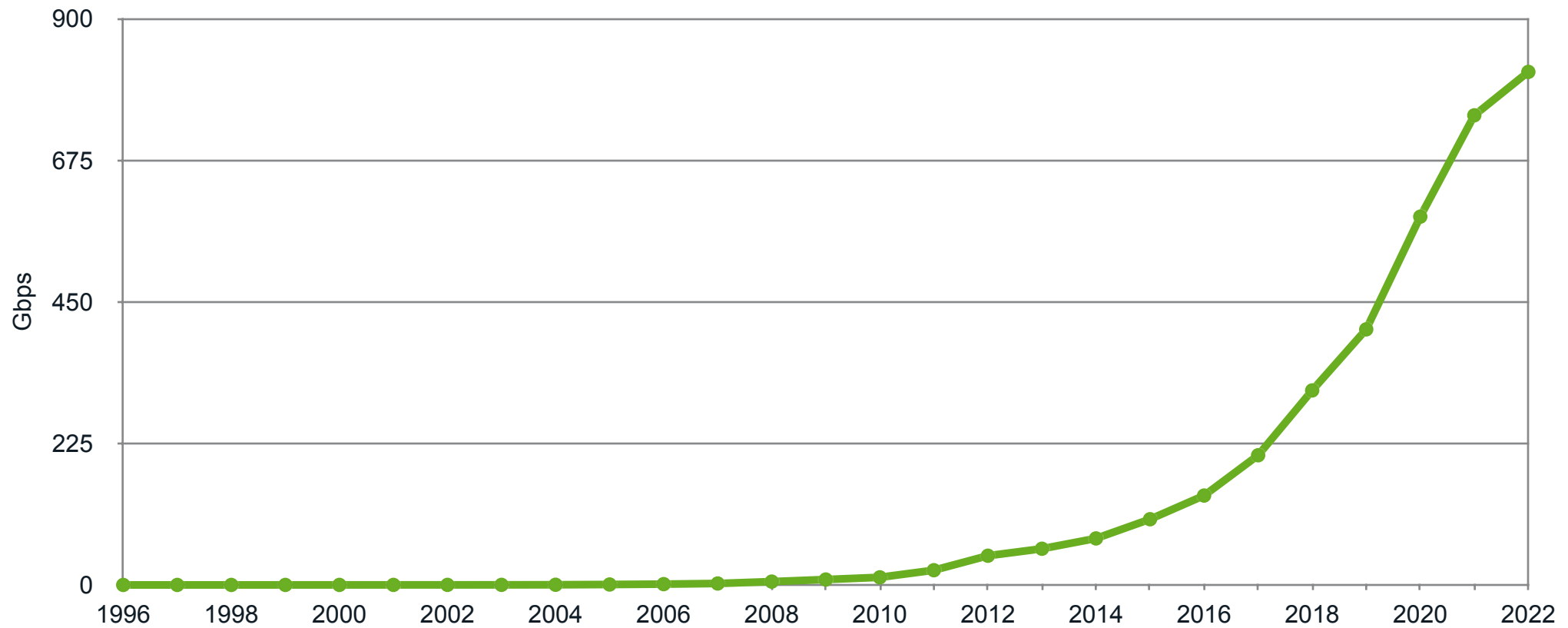
INTERCONNECTED NETWORKS PEOPLE OVER 25 YEARS

Traffic & Trends

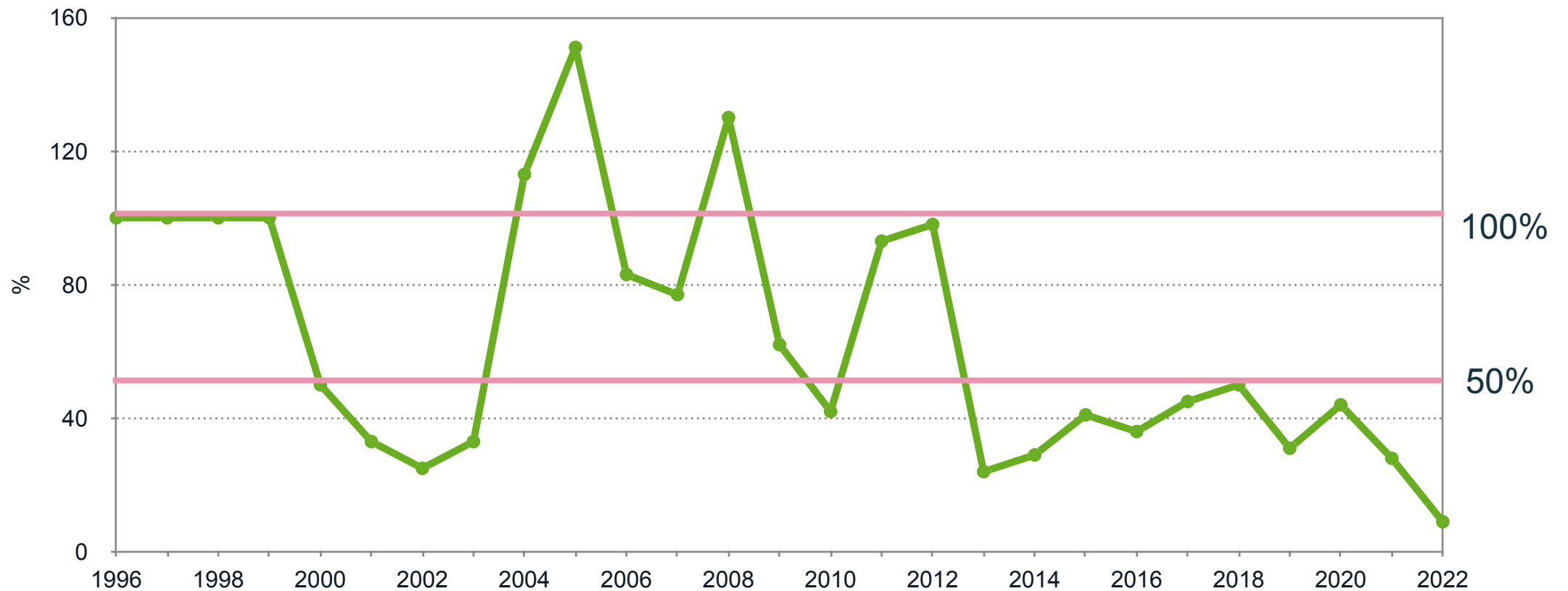
Connected Edge Capacity



Traffic Peaks :: 1996 - Now

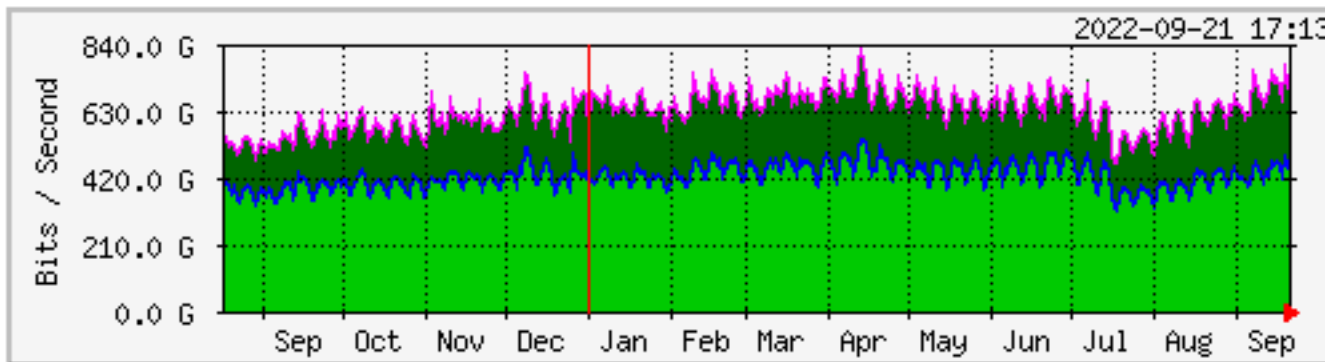


Traffic Peaks :: 1996 - Now - YoY Growth



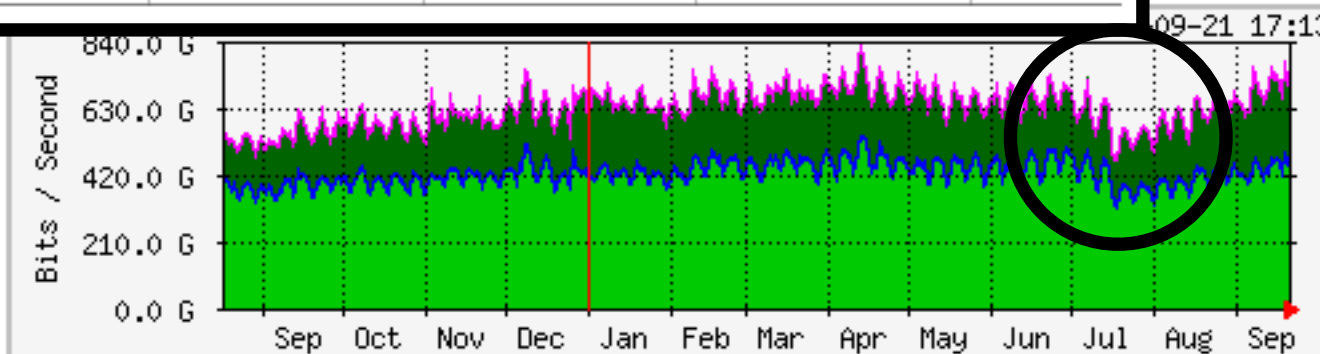
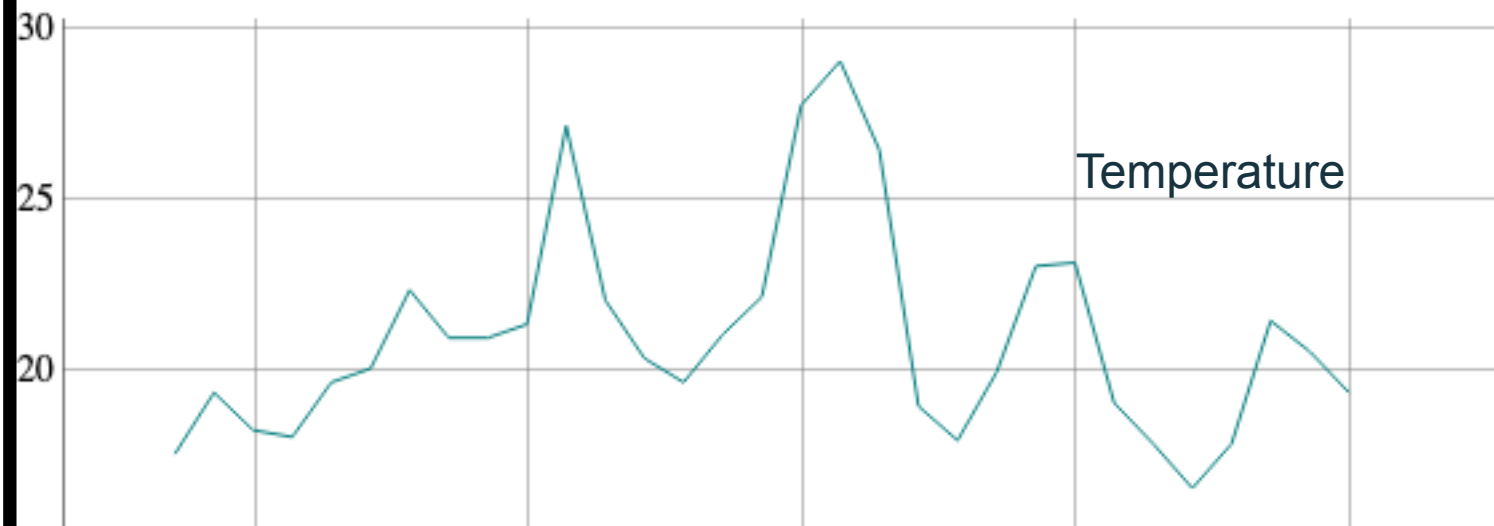
Annual Trend / Growth - INEX

Year Graph



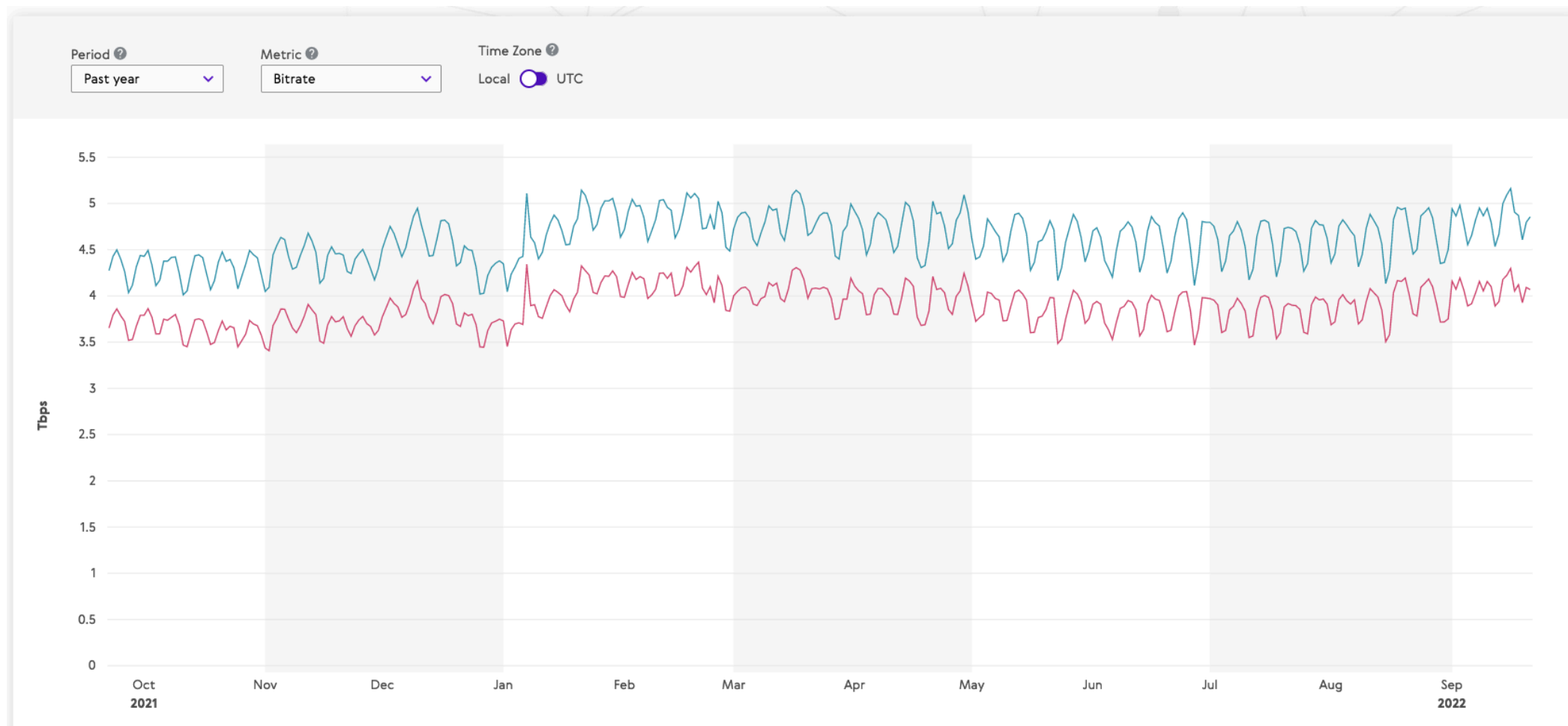
	Max	Average	Current
In	814.216 Gbits	424.728 Gbits	547.857 Gbits
Out	816.183 Gbits	424.805 Gbits	547.871 Gbits

DUBLIN AIRPORT - 2022



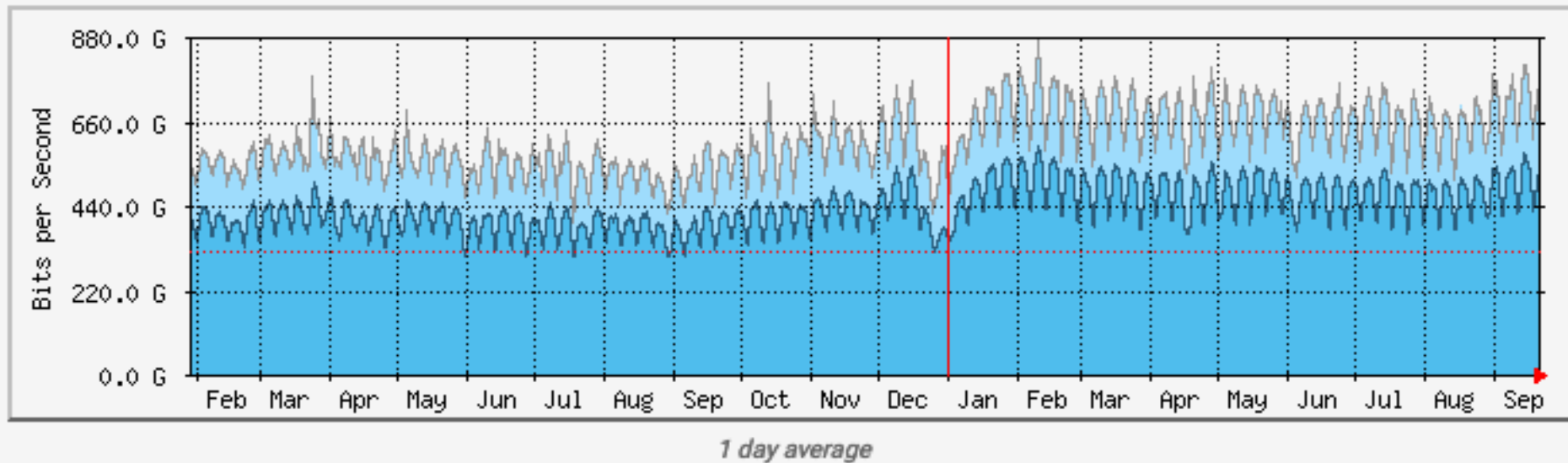
	Max	Average	Current
In	814.216 Gbits	424.728 Gbits	547.857 Gbits
Out	816.183 Gbits	424.805 Gbits	547.871 Gbits

Annual Trend / Growth - LINX



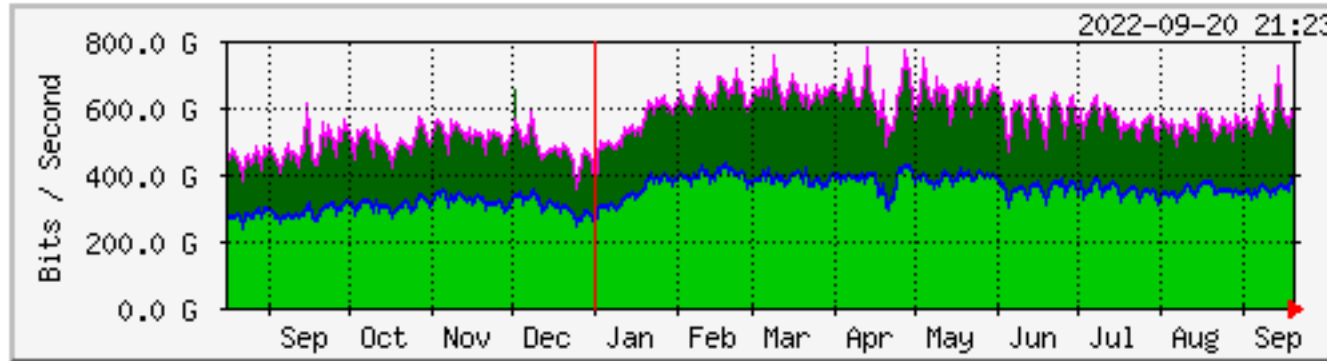
Annual Trend / Growth - LONAP

Yearly



Annual Trend / Growth - BCIX

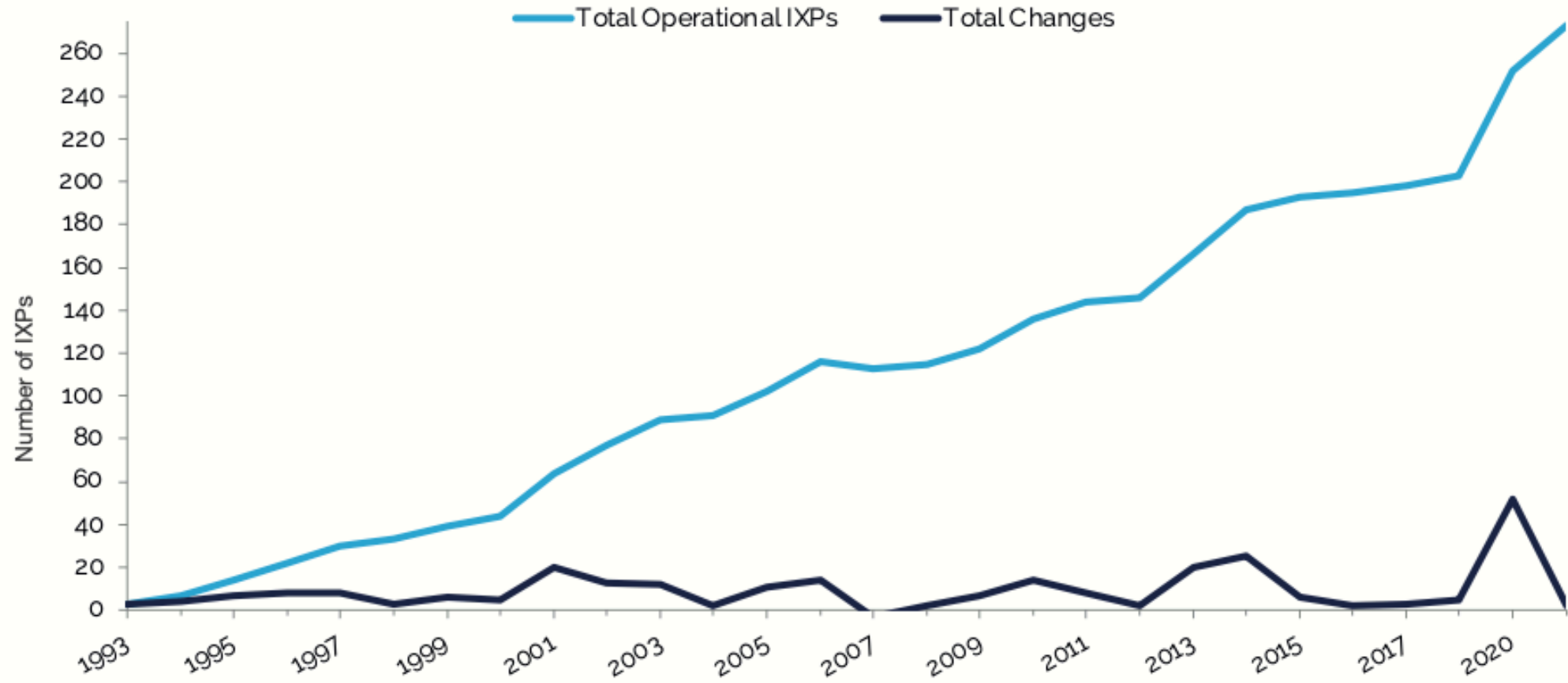
Year Graph



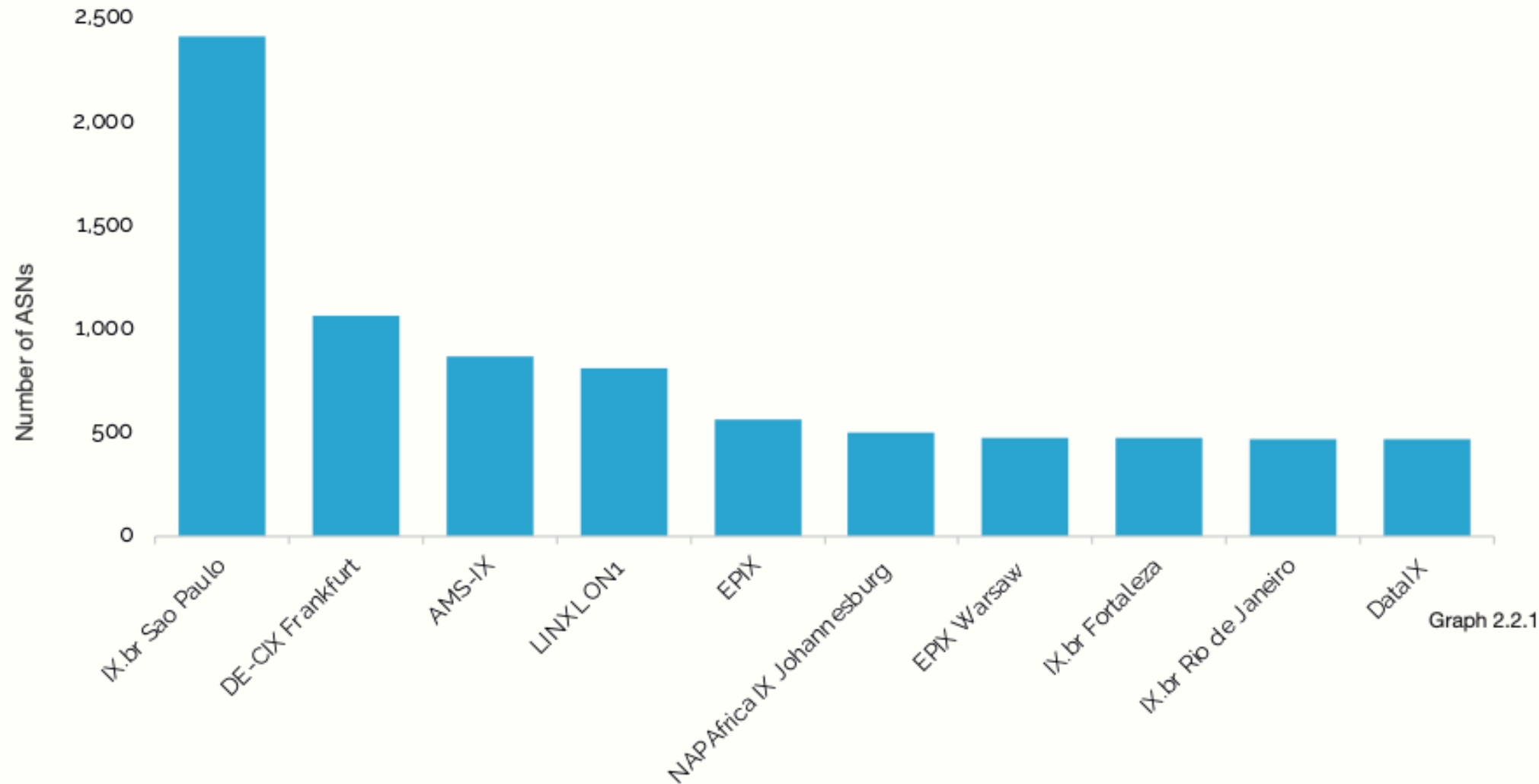
	Max	Average	Current
In	775.319 Gbits	347.106 Gbits	436.507 Gbits
Out	774.074 Gbits	347.292 Gbits	436.431 Gbits

Global IXP Statistics

IXP Growth in Euro-IX Region



“Top 10” IXPs by Connected ASNs



Source: Euro-IX IXP Report 2021

IXP Manager

8,637

Connected Networks

269Tb

Connected Capacity

18,294

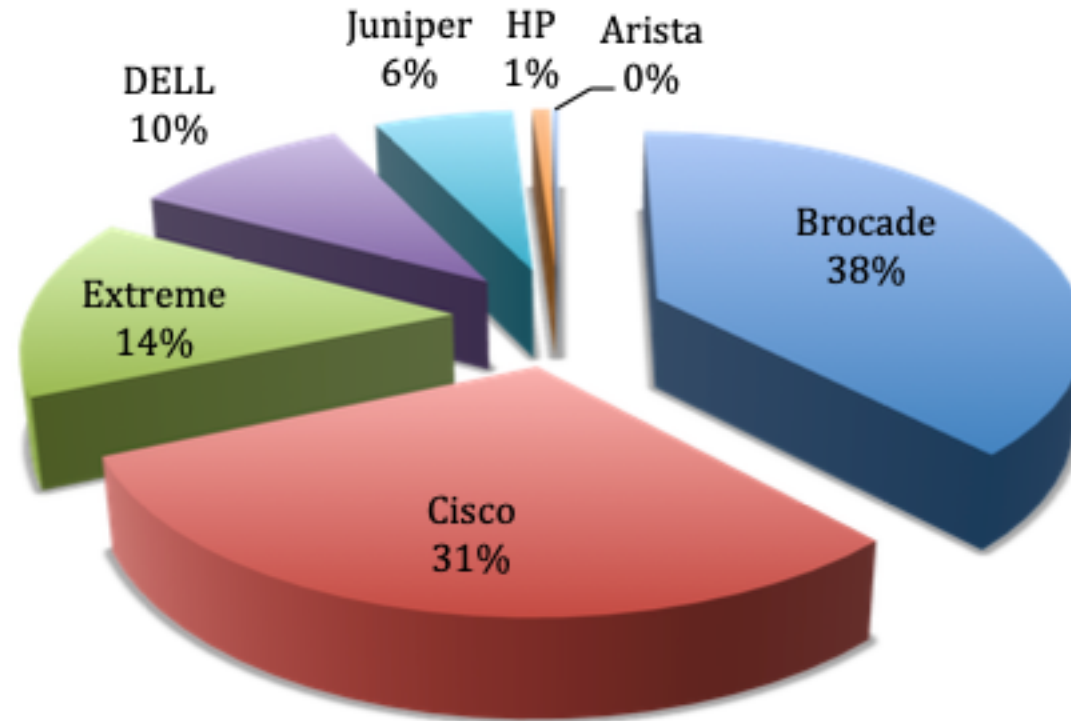
Connected Ports

There are at least **184** IXPs Powering Peering using IXP Manager around the world to connect **8,637** networks of which **5,199** are unique. The edge peering capacity of these networks is **269Tb** over **18,294** connected ports. We aggregate traffic statistics from 118 IXP Manager platforms which show us that the peak traffic exchanged is **52.21 Tbps**.

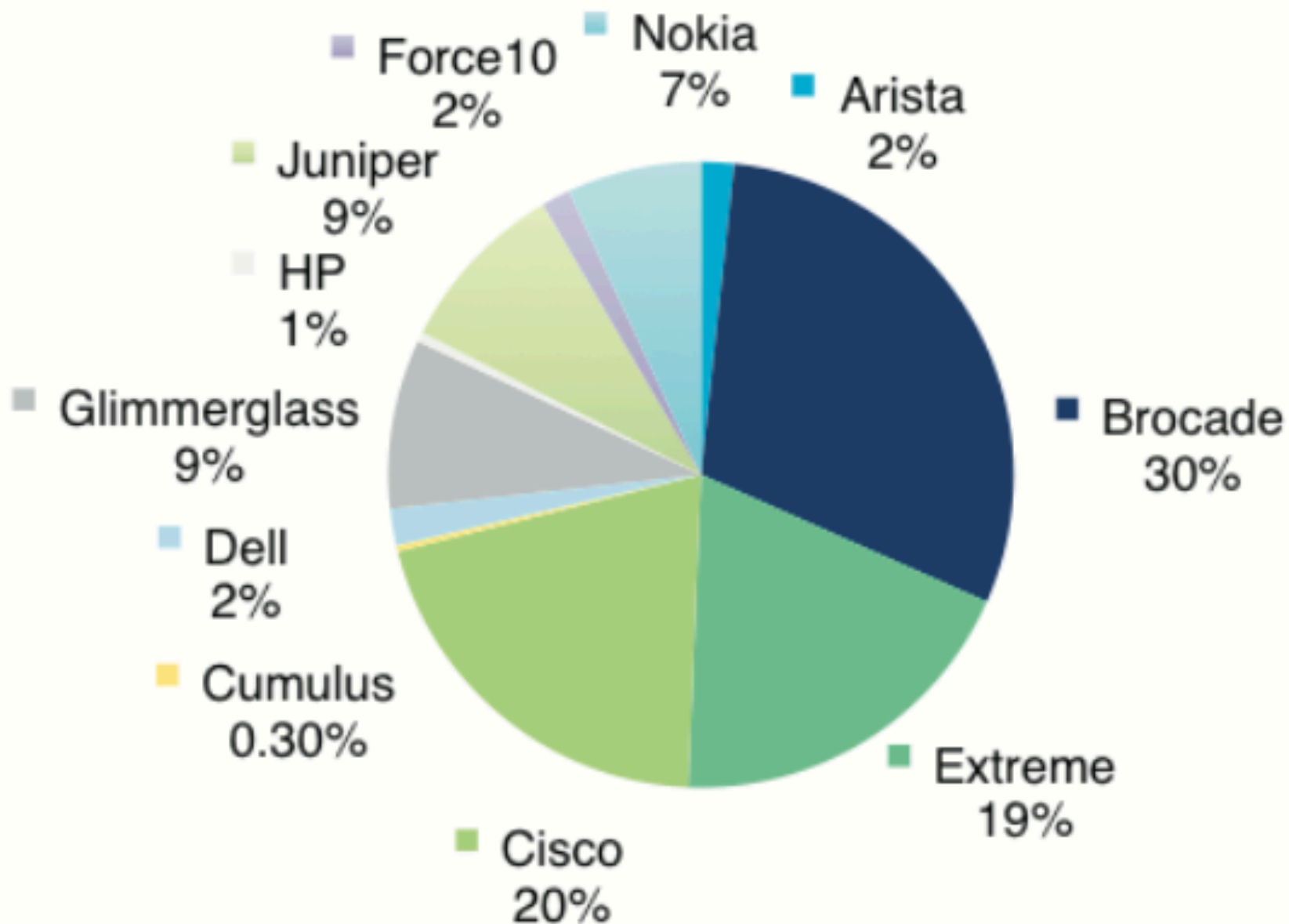
Switching Platforms @ IXPs

2012

Market share of switch/router vendors among European IXPs [%]

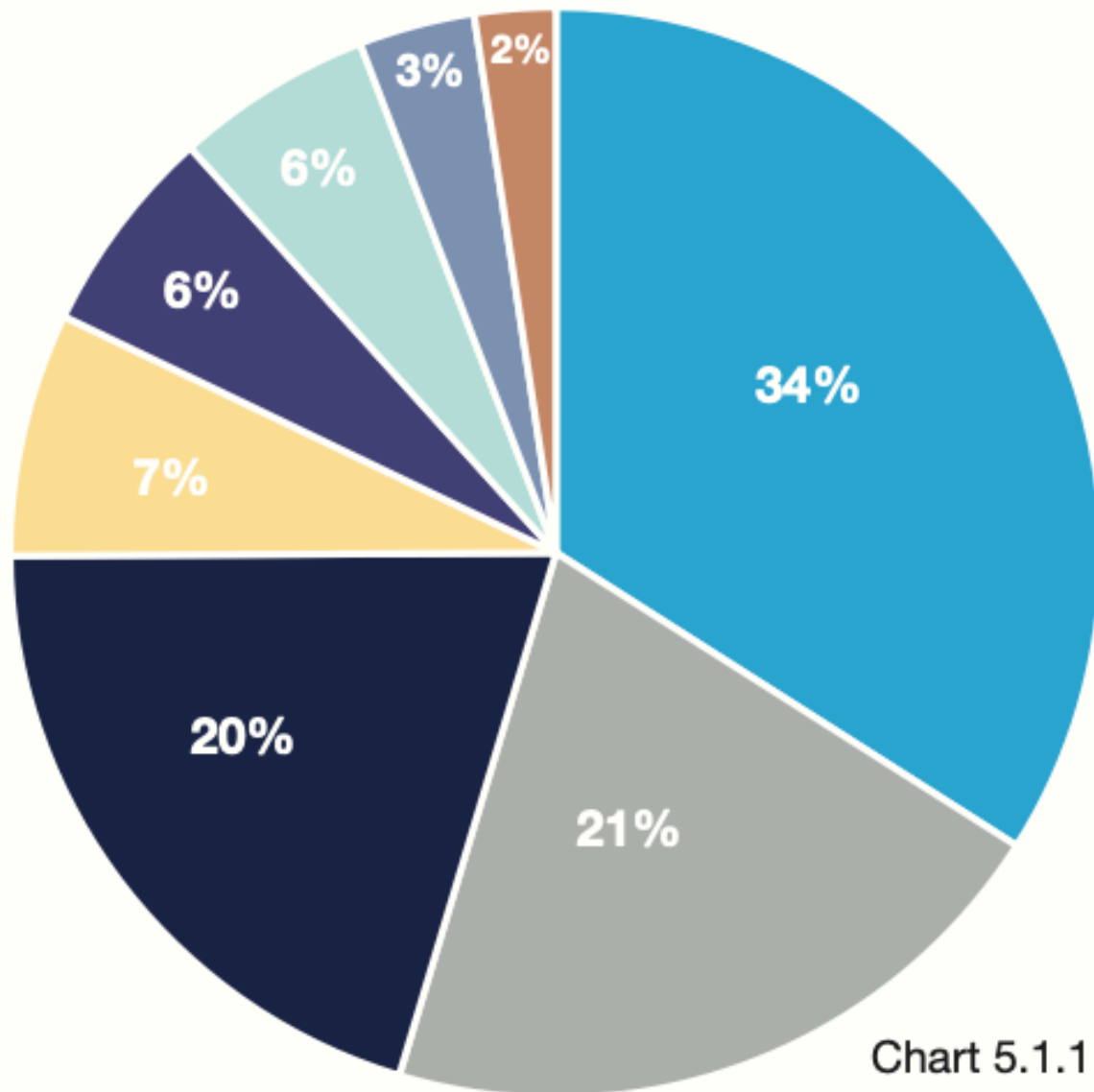


2016

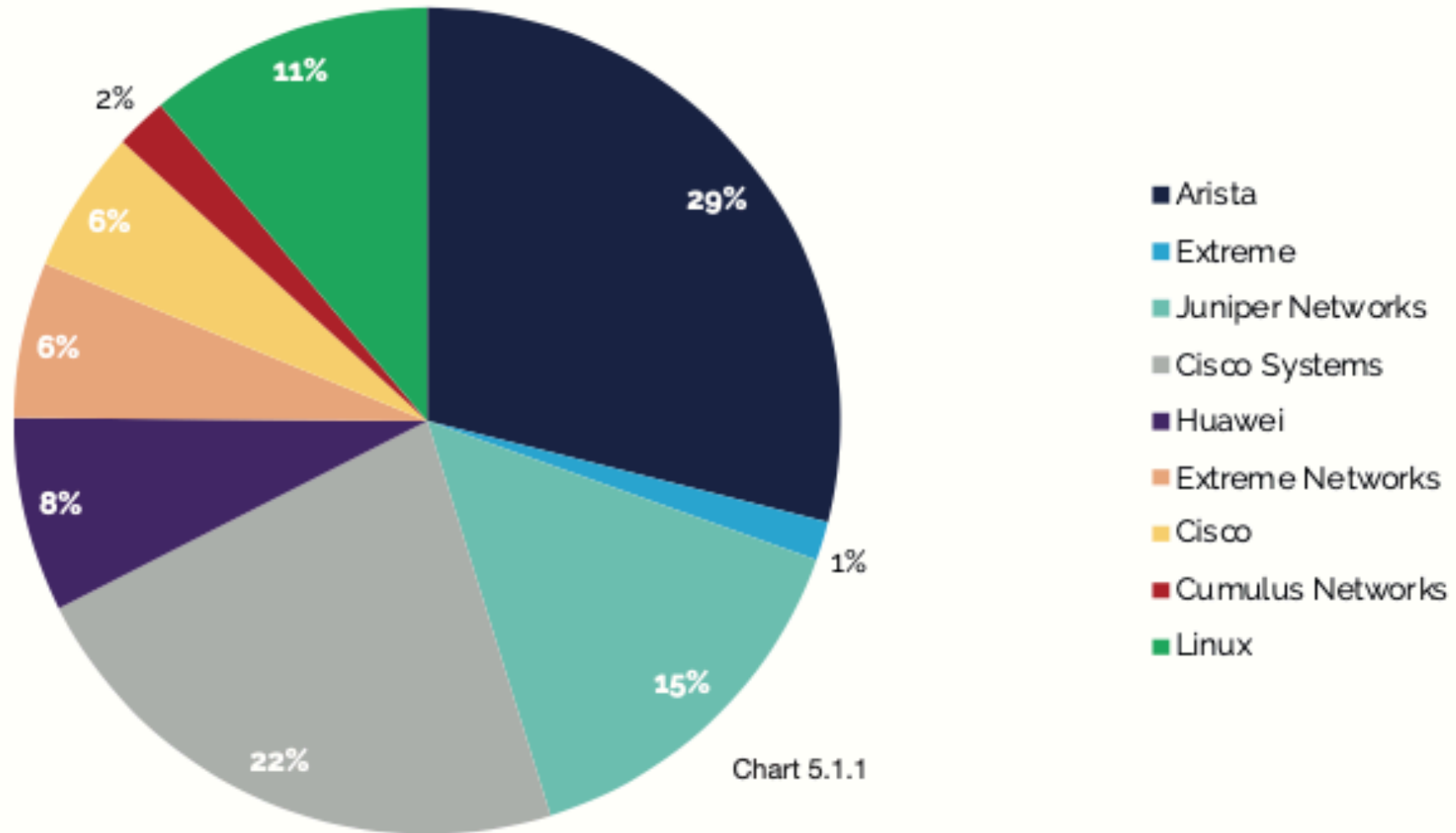


2019

- Arista
- Cisco
- Extreme
- Cumulus
- Huawei
- Dell Force10
- Juniper
- Other



2021



Member Platforms @ IXPs

2019

- Cisco Systems
- Juniper Networks
- Routerboard.com
- unknown
- Super Micro Computer
- Intel Corporate
- Huawei
- Arista
- VMware, Inc.
- Brocade

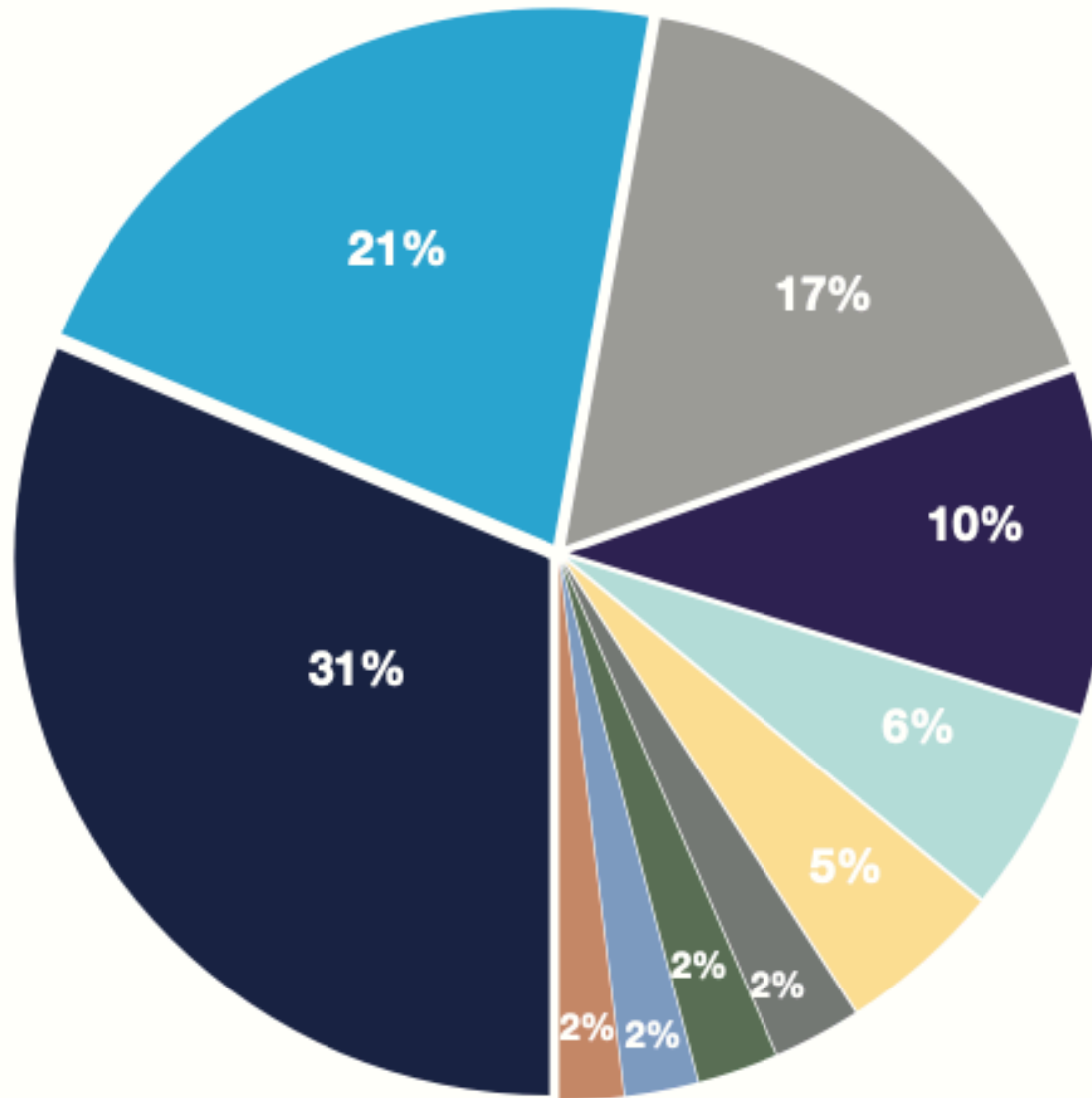
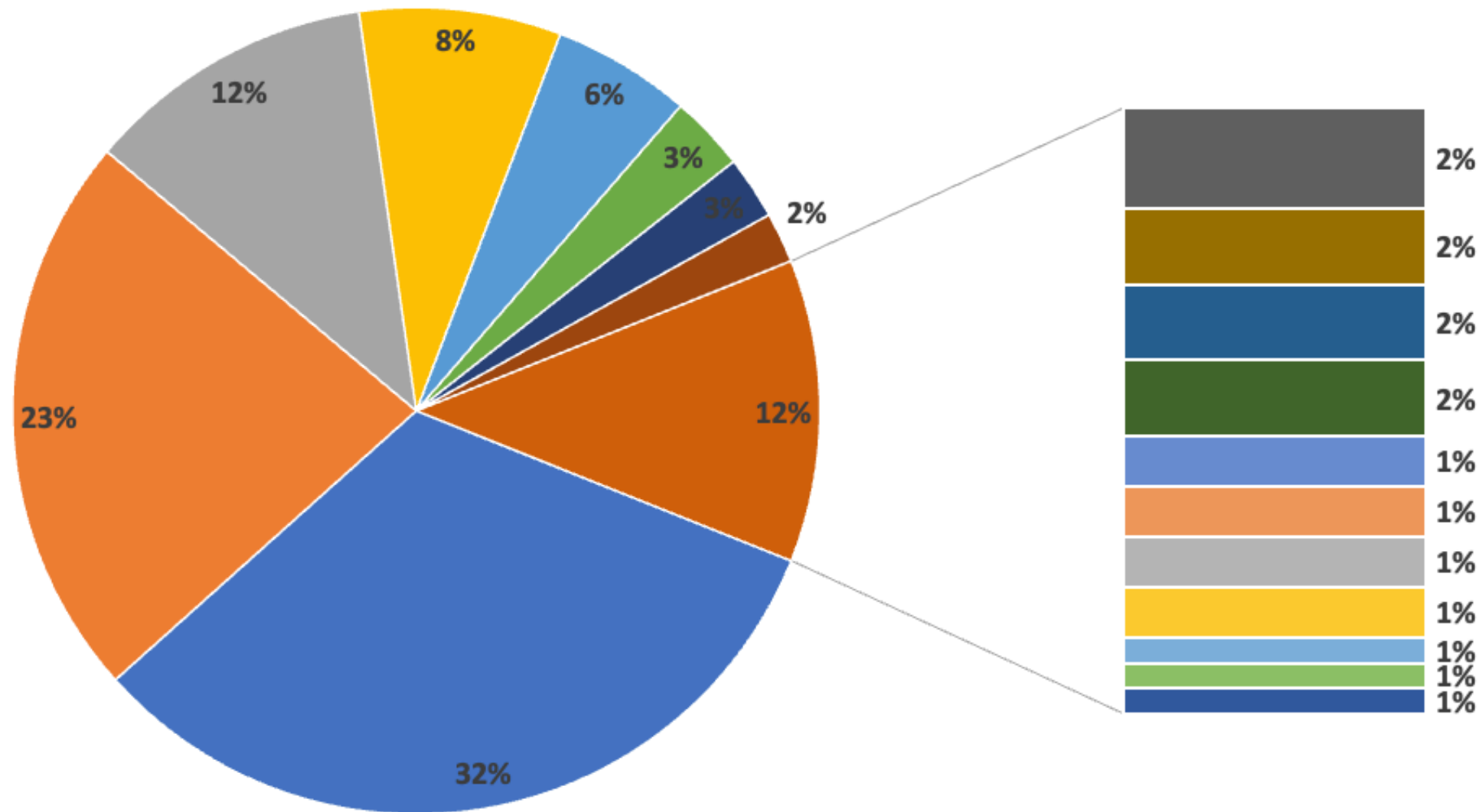


Chart 5.2.1

2022 @ INEX



- Juniper Networks
- Arista Networks
- HUAWEI TECHNOLOGIES CO.,LTD
- Shenzhen Lianrui Electronics Co.,Ltd
- Ubiquiti Networks Inc.
- Cisco Systems, Inc
- Nokia
- VMware, Inc.
- Brocade Communications Systems LLC
- Alcatel-Lucent IPD
- Routerboard.com
- Extreme Networks, Inc.
- IEEE Registration Authority
- Edgecore Networks Corporation
- Super Micro Computer, Inc.
- Unknown
- Intel Corporate
- Dell Inc.
- Hewlett Packard

Operations Update

Operations Update - *Business as Usual*

- New members, new connections, upgrades, migrations
- Route collector issue resolved as planned in April
- Route server clusters #1 and #2 refreshed as planned in June
- Issue with AS112 (similar to rc1) in July, non-service affecting
- Transceiver failures, line card reset
- Support requests
- Continued engagement with BH Consulting on ISO27001
- Reminder: EOL'ing 1Gb ports
- Management servers from Dublin recycled to Cork as planned
- DWDM transmission network stable* since upgrades

IXP Manager

From 2016



New project website: www.ixpmanager.org (and @ixpmanager)

Have issued a call for sponsors - two at *Platinum* level already
ISOC, swissix

Looking for a full-time PHP developer #jobfair

Have a one year development plan (plus three year outlook)

Sponsorship-Led Features

- Migration of controllers and views from ZF to Laravel
- Migration of ORM from Doctrine2 to Laravel Eloquent
- Layer2 ACLs
- Patch Panel / Cross Connect Management
- Core Bundles
- User Interface Testing
- OAuth (with PeeringDB), 2FA and authentication rewrite
- DB Listeners and Logging CRUD Operations
- And much much more....

IXP Manager

- As you know, Yann Robin moved back to France late 2021
- We are now recruiting a new PHP developer
 - This is funded via sponsorship.
 - If you know anyone, please point them in our direction.
- ~~New release imminent – route server filtering.~~
- “Gifted” a NCC Group security audit of IXP Manager
 - Fixes in next release.



Thank you



INEX

INTERCONNECTING NETWORKS
AND PEOPLE FOR OVER 25 YEARS