



**Power and protect
life online**



Akamai Content Delivery in the UK

Paul Dunbar
Network Architect
LINX123

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Agenda

- Who is Akamai?
- Akamai Intelligent Platform
- Akamai in the UK
- How do we meet our Traffic demands?
- UK Akamai Platform Evolution
- UK Akamai Backbone Evolution
- Euro2024 : Traffic Delivery (UK)

Who is Akamai?

The world's most distributed platform for cloud computing, security, and content delivery

Akamai Intelligent Platform

Highly distributed on-demand computing platform delivers all forms of web content and applications



Typical daily traffic:

- More than a **3 trillion** requests served
- Delivering over **300 Terabits/second**

Akamai in the UK

- Daily Peak Traffic between 17-20 Tbps
- 2nd largest country for Traffic delivery globally
- Capacity distributed across 12 cities
- ~19,000 servers
- In-country traffic delivery over AANP, PNI, IXP, Transit
- UK is also donor country to a number of African countries & neighbouring EU countries

How do we meet our Traffic demands?

- Akamai Traffic Forecasting - Half yearly cycles
 - Inputs from Partners and Customers
 - Traffic trends - seasonal & regional/country level
 - Organic Growth - YoY
 - Events - Sports, Downloads, other live events
 - Headroom - built-in to forecast & absorb unexpected traffic events
- Quarterly Capacity Reviews and Deployment Cycle
 - Resiliency Review

UK Akamai Platform Evolution

AANP

- Build larger sized AANP deployments for major Providers
 - Increasing Cache efficiency & Performance
- Smaller AANPs phase out
 - Offer PNIs instead for direct connectivity to Akamai
 - Use and/or IXP capacity

UK Akamai Platform Evolution

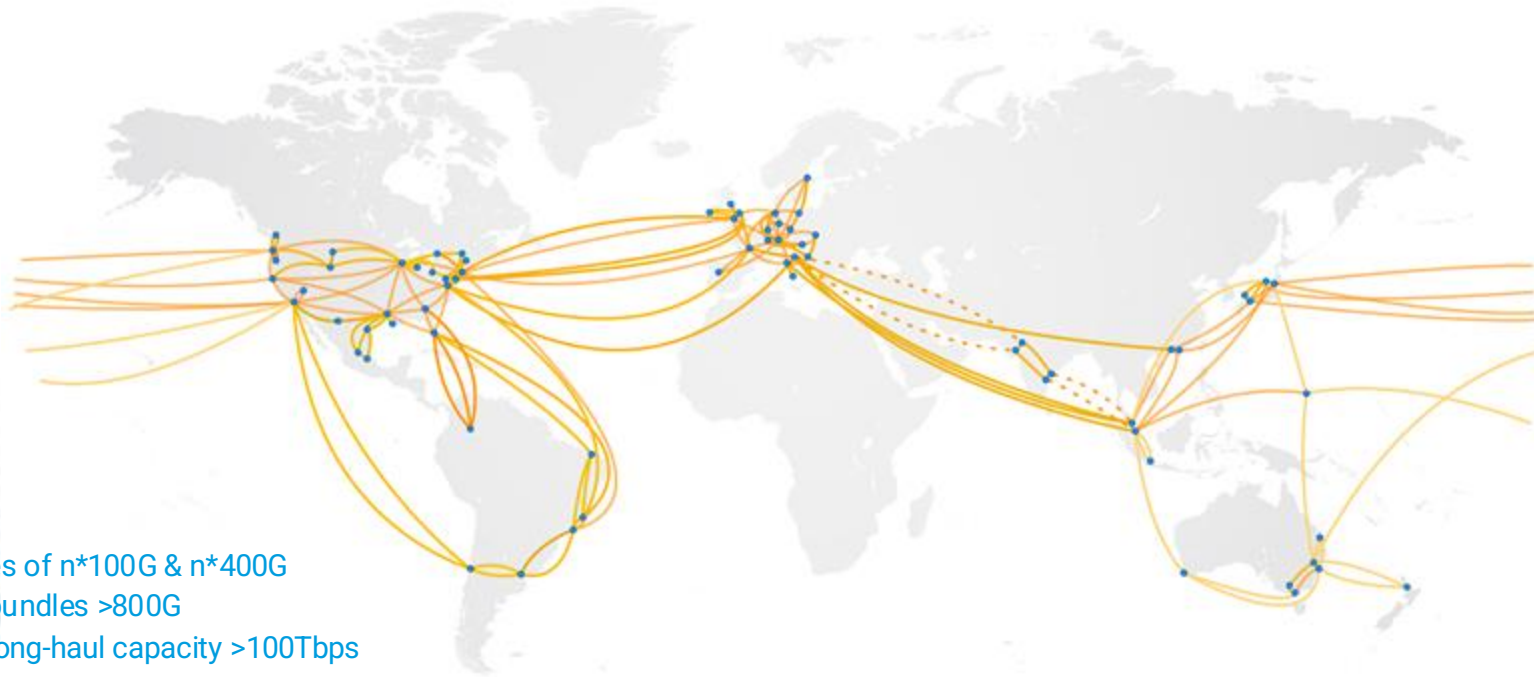
Public Infrastructure (PNI, IXP, Transit)

- Build Larger Clusters (Fabrics)
- Bigger regions for better cache efficiency (LON, MAN)
- Fabrics have built-in resiliency in their design
- Increase PNI and IXP capacity
- Partner and Customer connectivity

- <https://www.peeringdb.com/net/2>

Akamai Global Backbone

Summer 2024



UK Akamai Backbone Evolution

An ever growing CDN Platform implies an ever growing Backbone

- Increase Capacity builds within UKI (LON, MAN, DUB)
- Increase Trans-Atlantic & EU capacity
- New Backbone Design for **Tier1** Metros (globally)
 - Includes London

UK Akamai Backbone Evolution

New Backbone Design for London

- Metro Aggregation (MAGG) architecture
- Spine and Leaf Topology
- Allows intra- and inter-site Link scalability
- Allows Leaf to scale horizontally
- Allows PNI connectivity to server capacity on a Metro Level
 - i.e. not just on a per DC level where server capacity is installed but all DCs in a Metro

Components of the Backbone



IEN

InterEcor Network

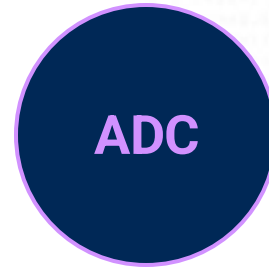
- Local aggregation platform
- Connects various types of Akamai deployments
- Connects third-party Cloud and ISP networks



ICN

InterCity Network

- Long-distance access between IEN locations, including domestic and subsea capacity

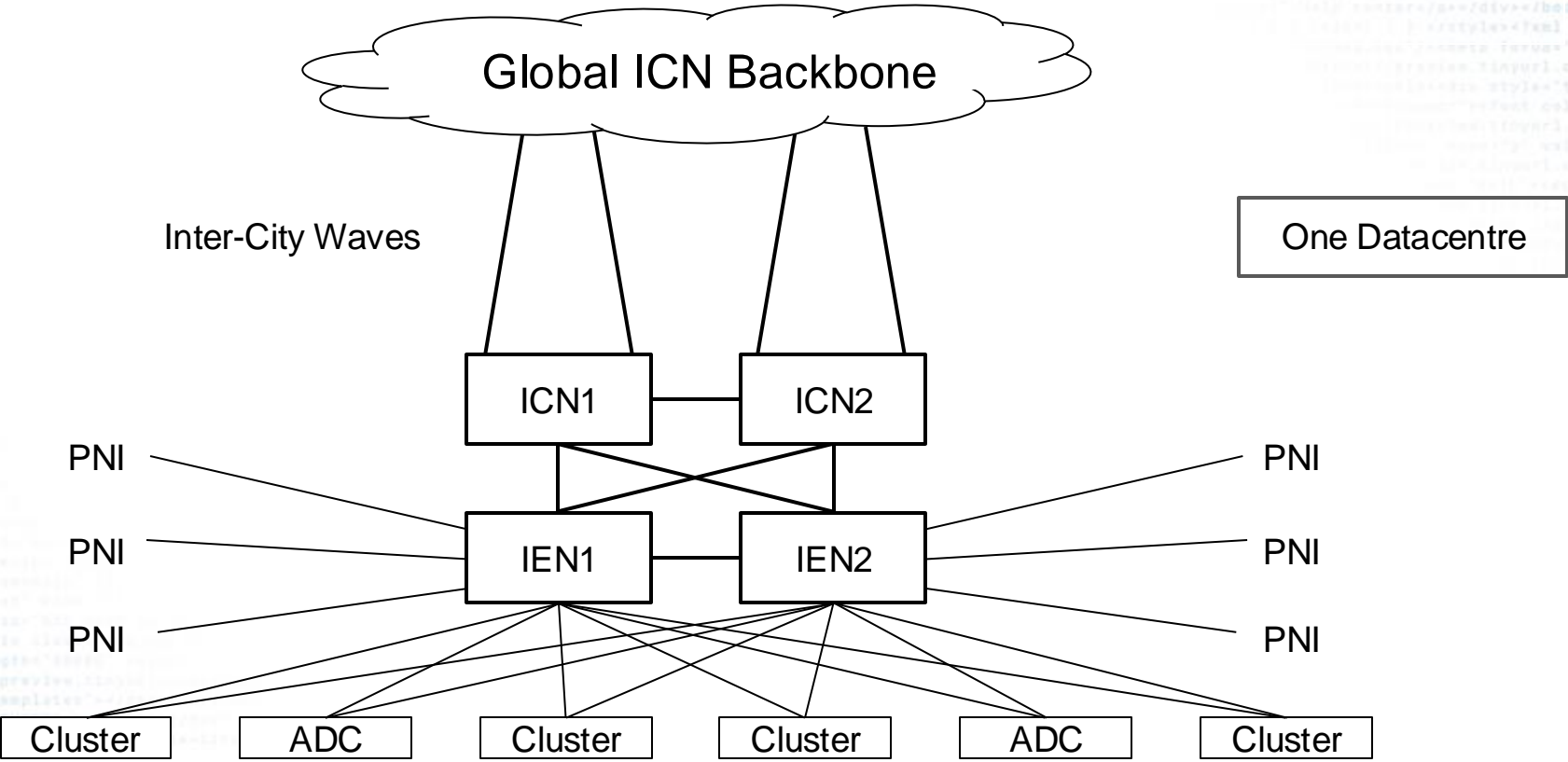


ADC

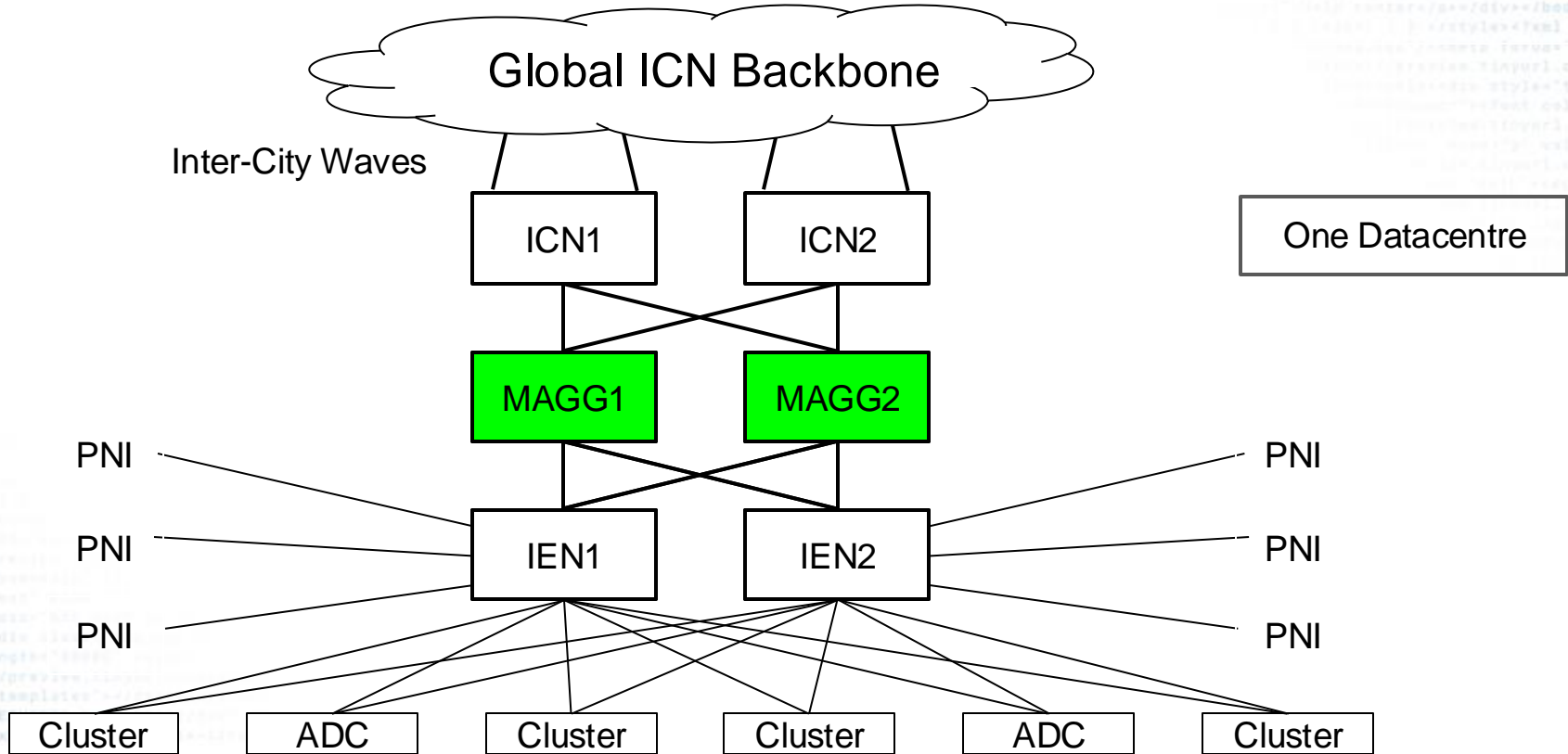
Direct Connect

- Customer interconnection platform that enables privatized communication paths for Akamai customers

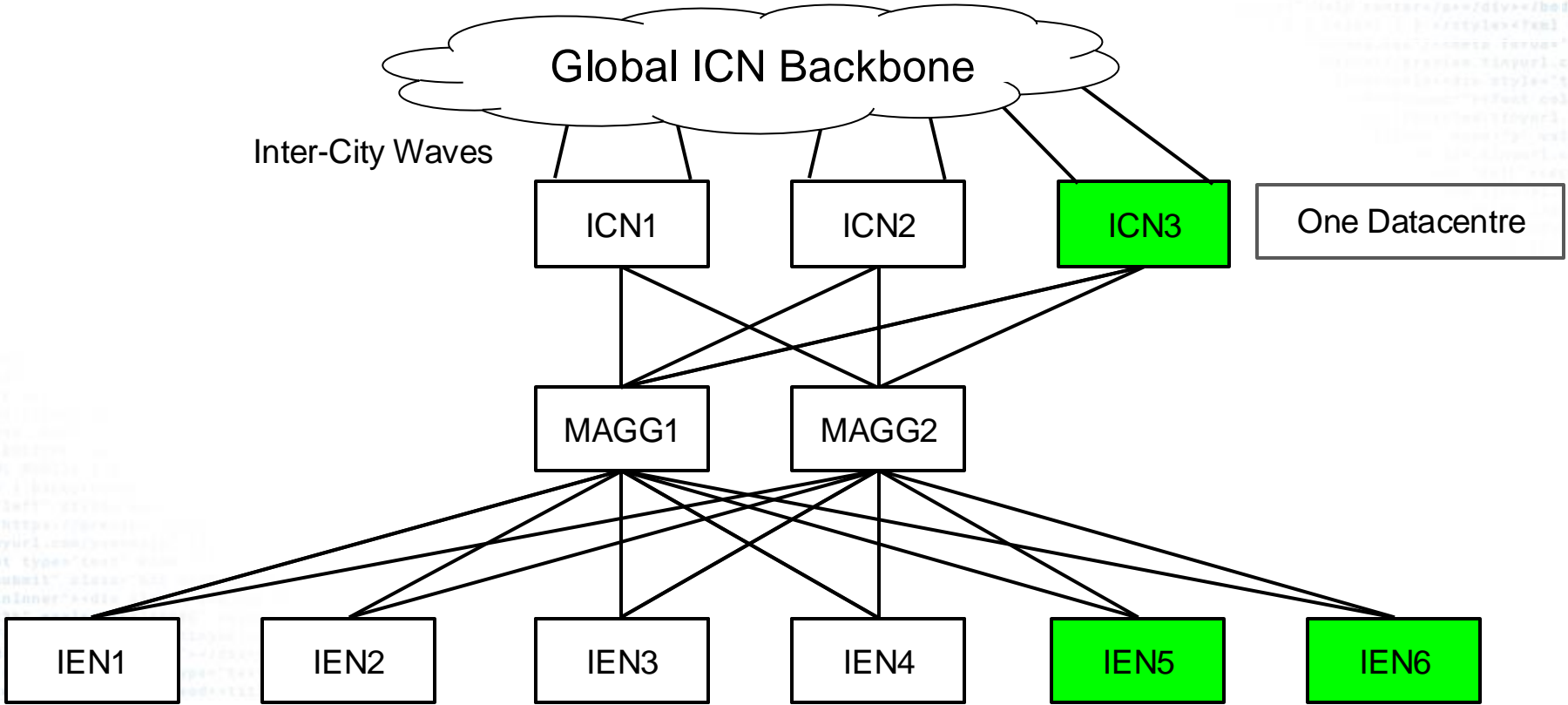
UK Akamai Backbone Evolution



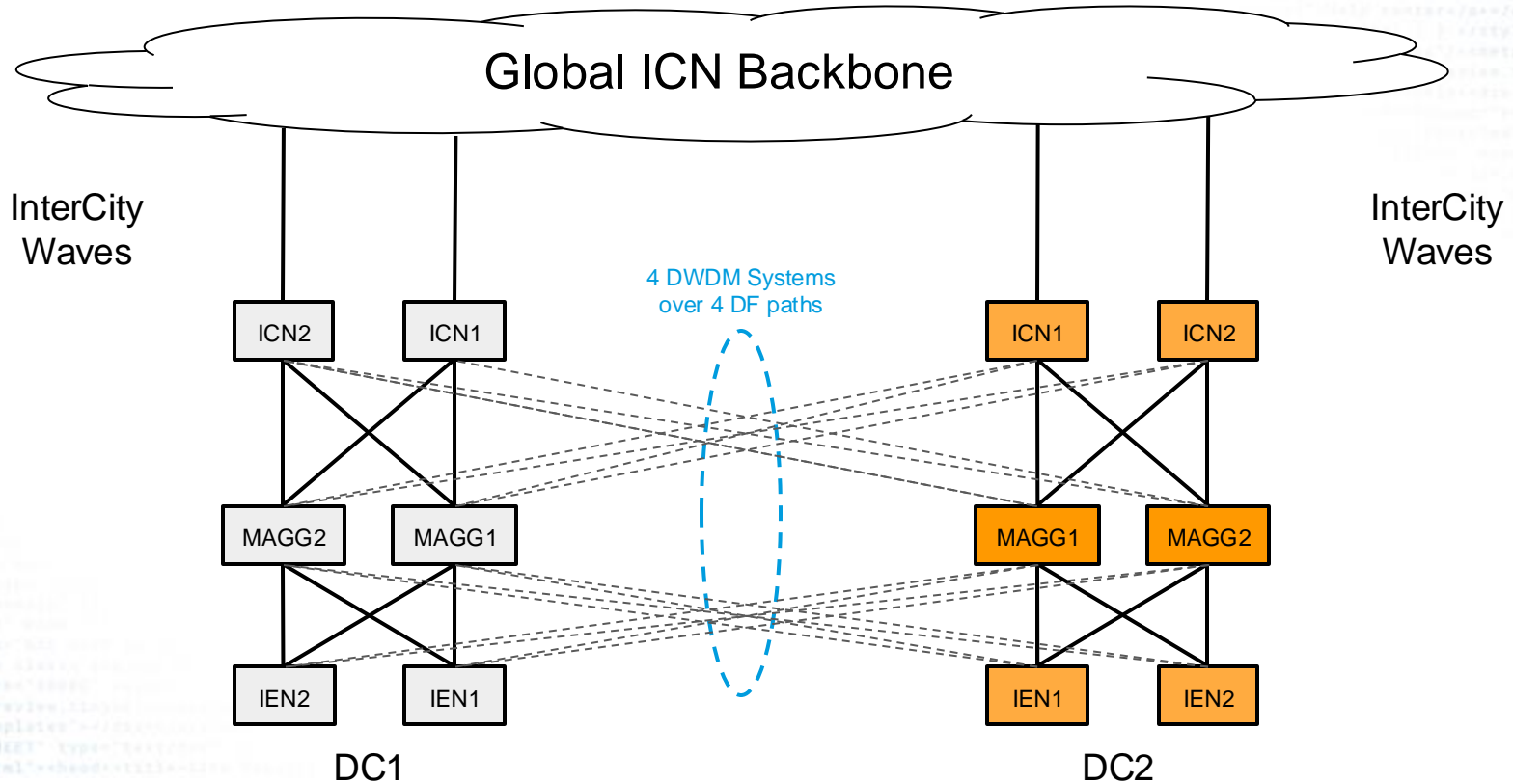
UK Akamai Backbone Evolution - MAGG Design



UK Akamai Backbone Evolution - Leaf Scalability



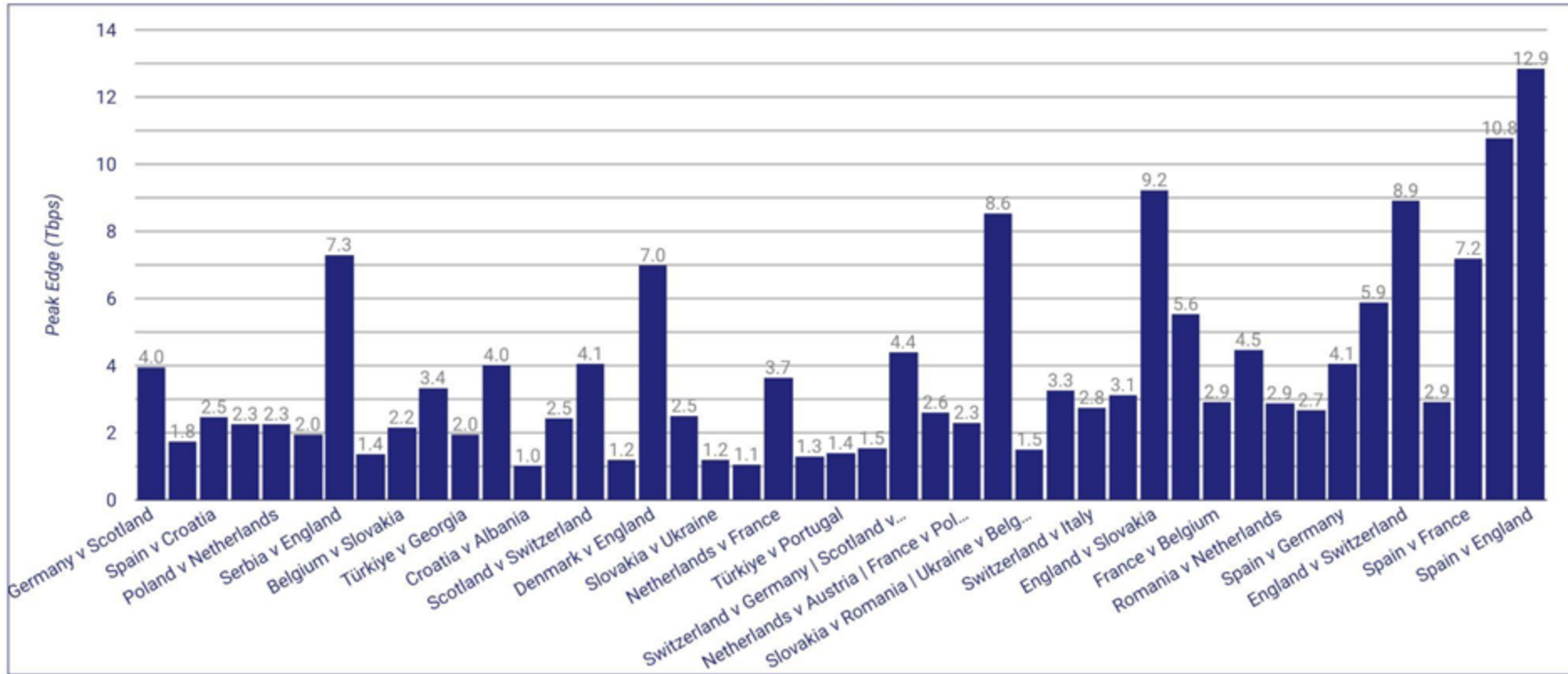
UK Akamai Backbone Evolution - Metro Connectivity



Euro 2024 - Traffic delivery (UK)

Euro 2024 - Traffic delivery (UK)

Peak Traffic Summary



Euro 2024 - Traffic delivery Takeaways (UK)

- Inaugural Game : Germany vs Scotland ~4Tbps
- Scotland Games: stay at ~4Tbps through out the Group stages
- England Games: increase from ~7 Tbps to ~13Tbps (Final)
- Streams : HDR (as decided by UEFA)
 - Lower bit rate than UHD

Q&A

Paul Dunbar <pdunbar@akamai.com>

PeeringDB: <https://www.peeringdb.com/net/2>

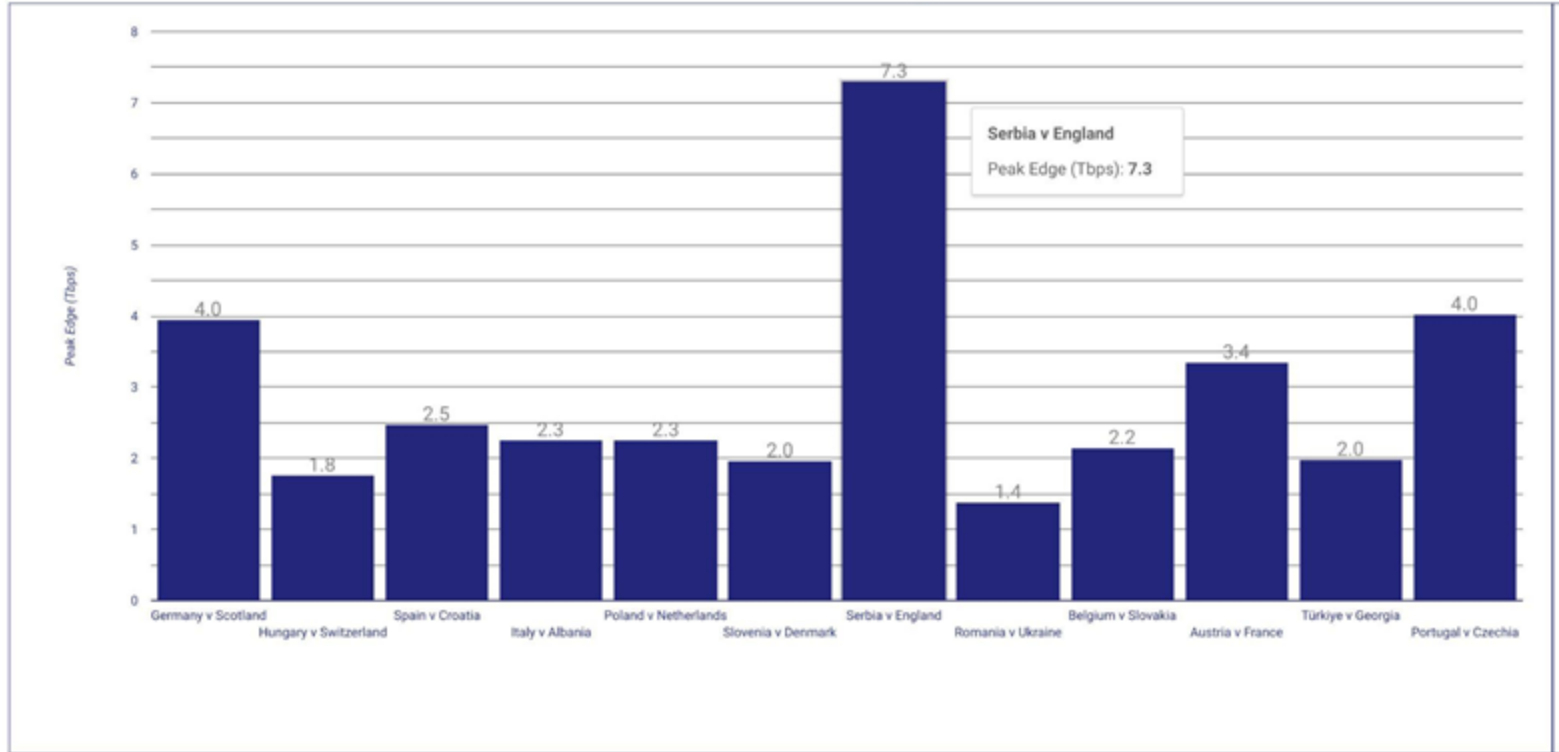
Peering Request: <peering@akamai.com>

Appendix

Euro 2024 UK Traffic Peaks through the Stages

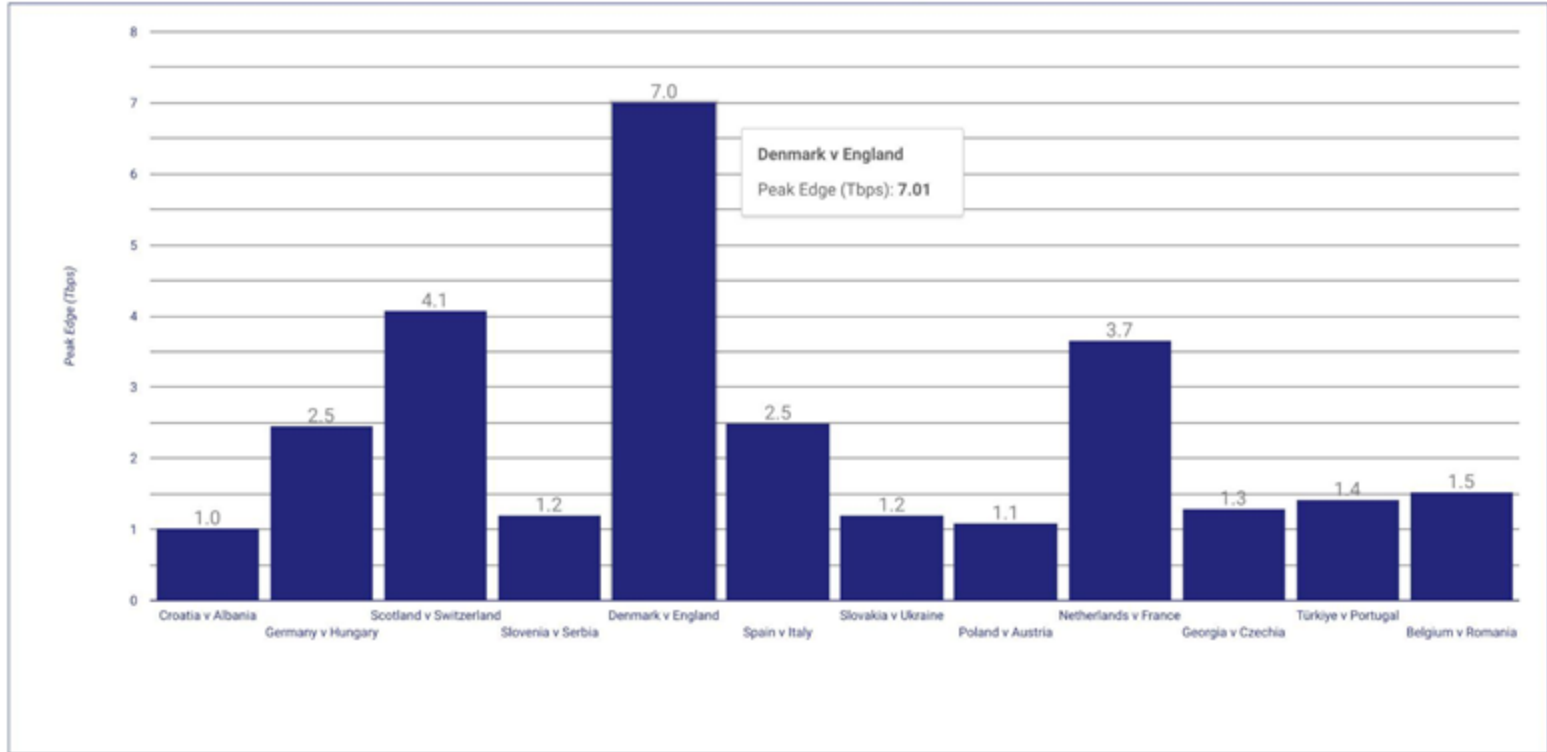
Euro 2024 - The Story so far (Group Match 1)

Peak Traffic Summary



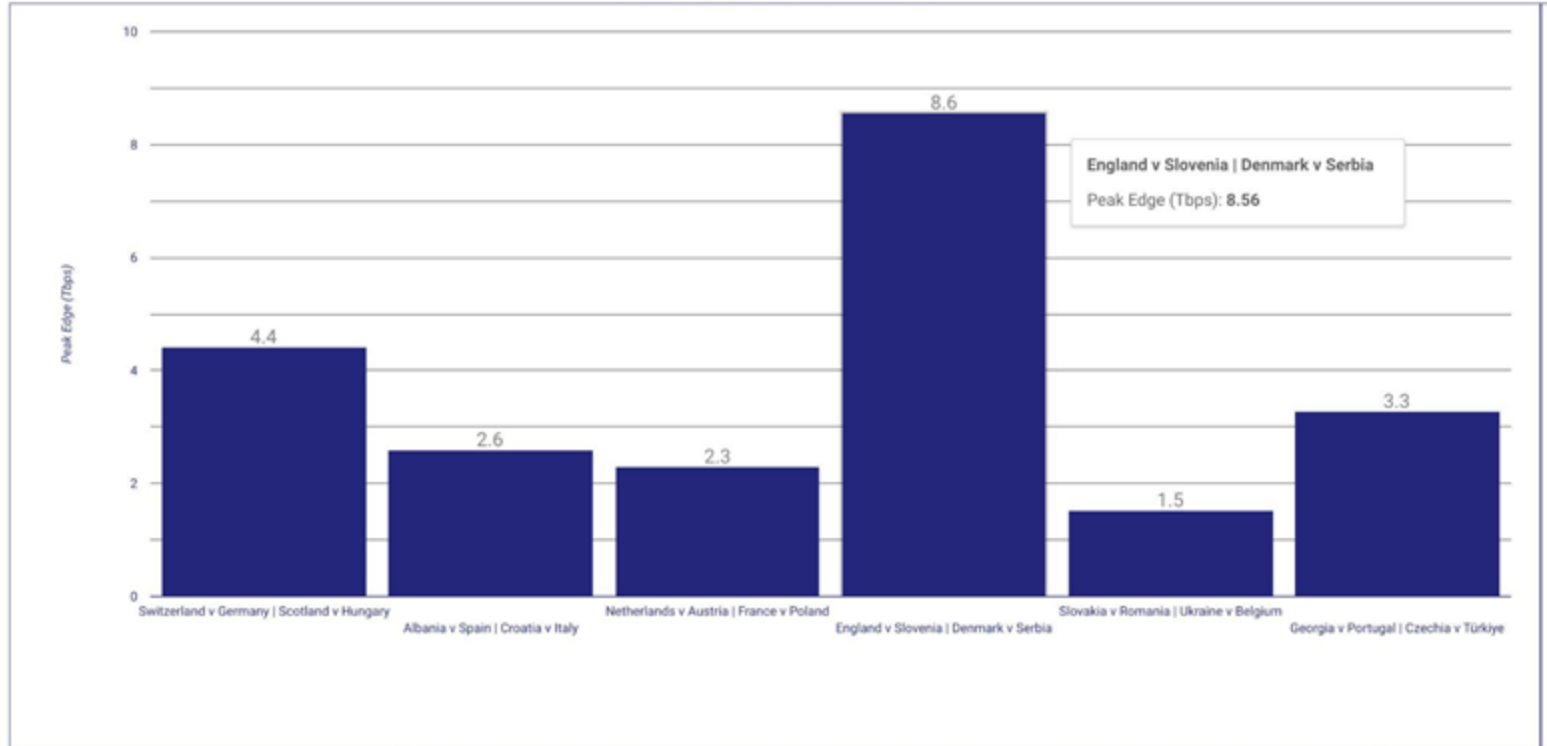
Euro 2024 - The Story so far (Group Match 2)

Peak Traffic Summary



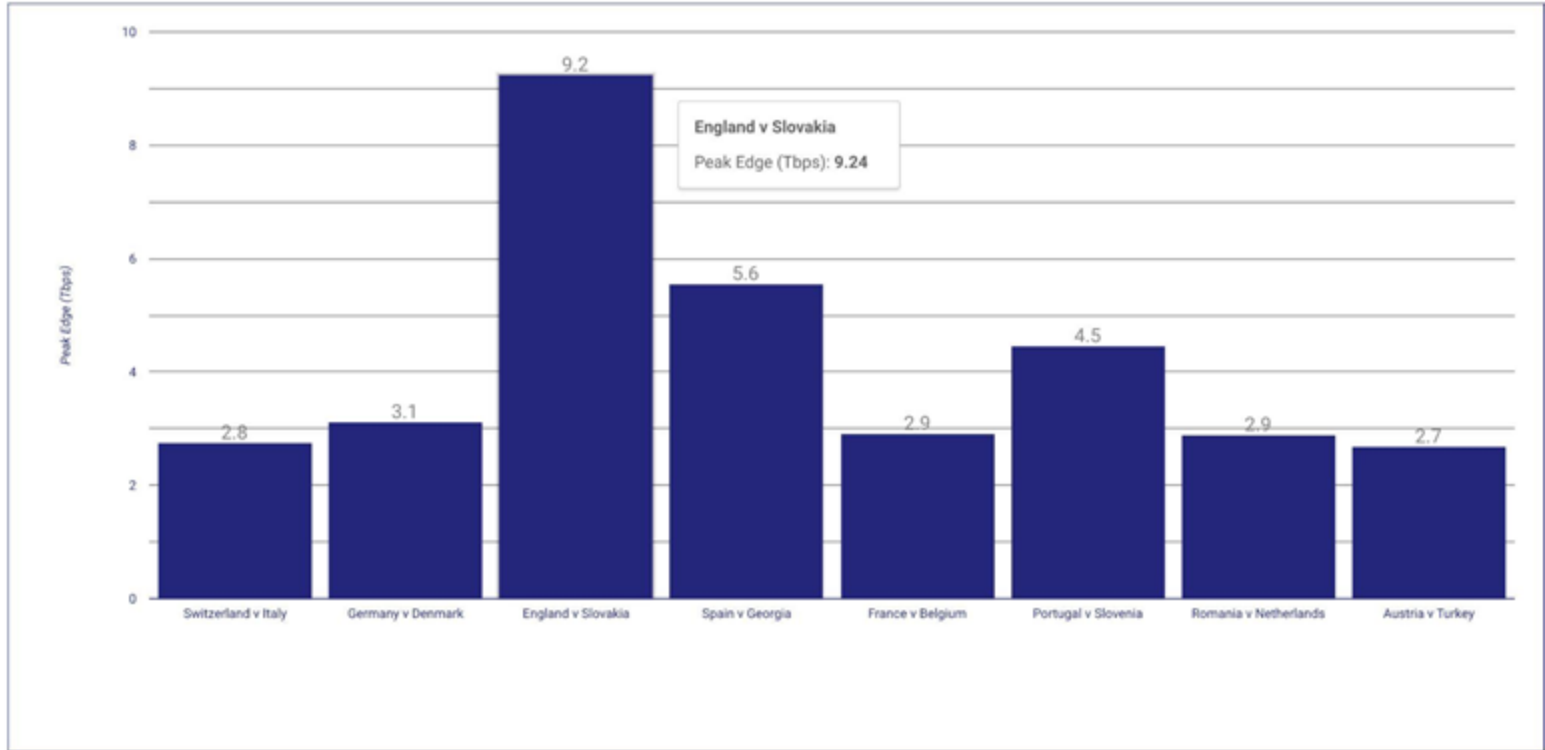
Euro 2024 - The Story so far (Group Match 3)

Peak Traffic Summary



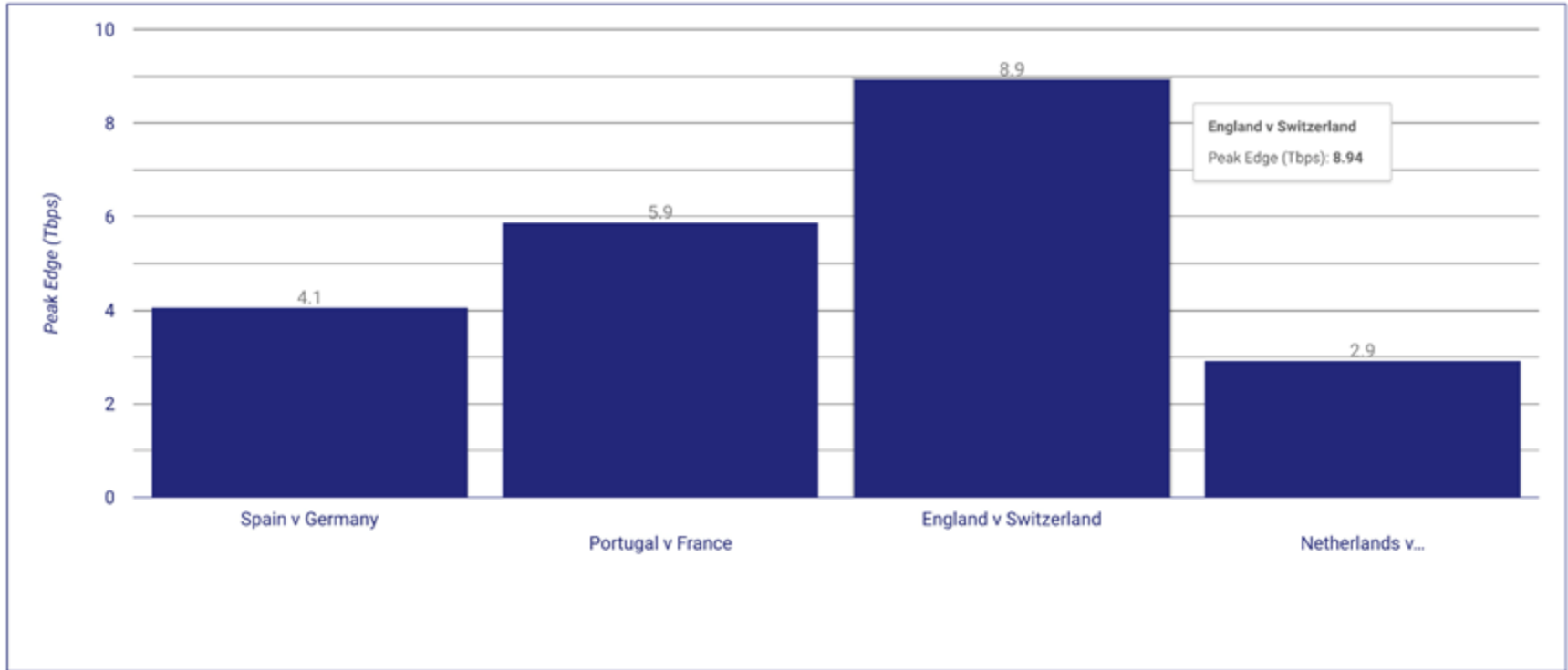
Euro 2024 - The Story so far (Last 16)

Peak Traffic Summary



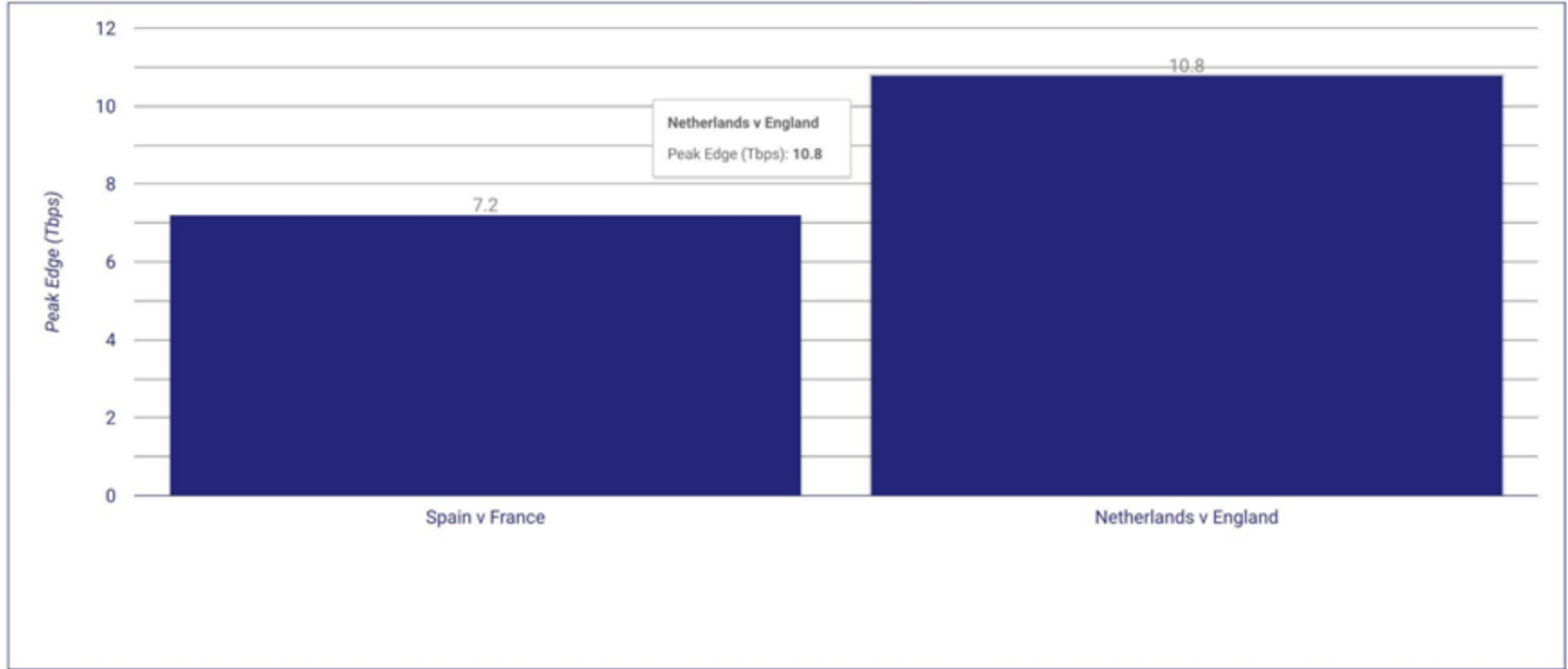
Euro 2024 - The Story so far (Quarter Finals)

Peak Traffic Summary



Euro 2024 - The Story so far (Semi-Finals)

Peak Traffic Summary



Euro 2024 - The Story so far (Finals)

Peak Traffic Summary

