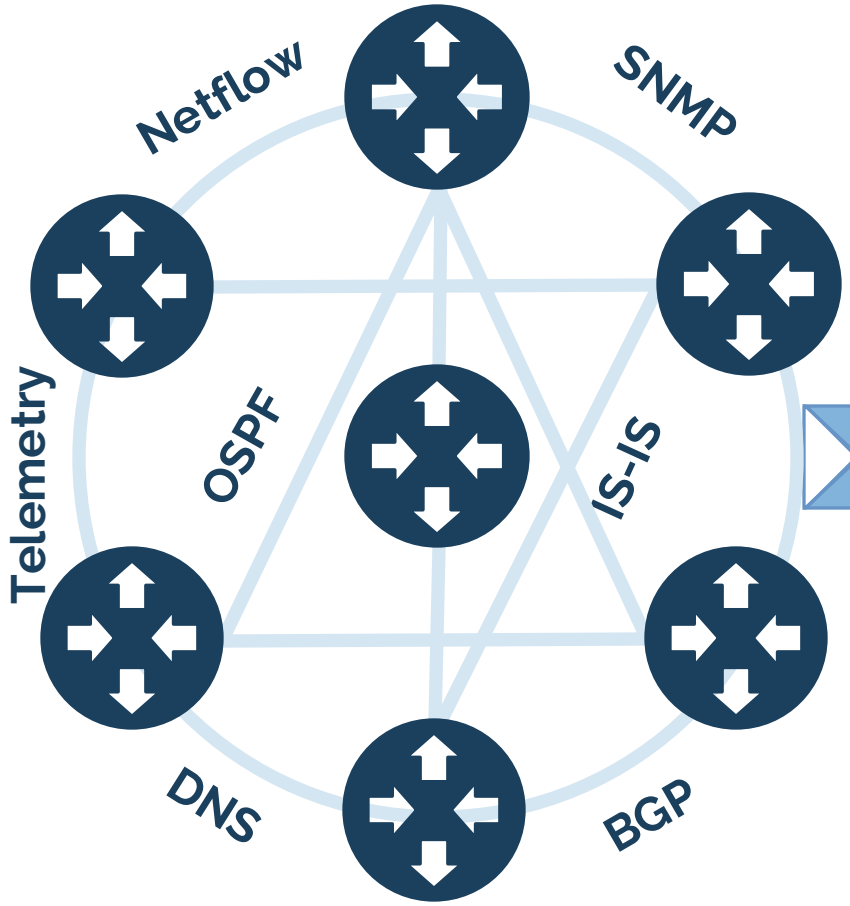
Forward Path

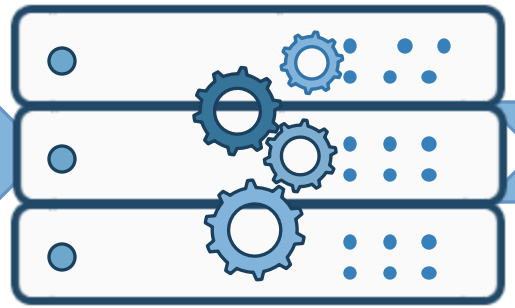
Matching routes to traffic levels

2025

What BENOCS does:



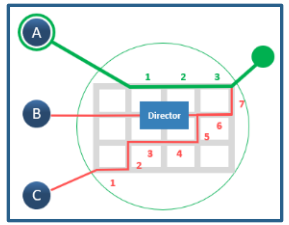
BENOCS CORE ENGINE



Our proprietary aggregation and cross correlation process requires significantly less compute power compared to competitors

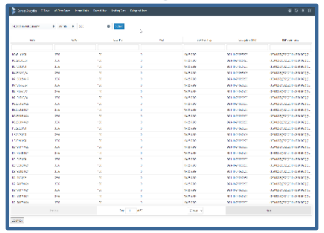
Flow Explorer

CDN Flow Director



Capacity Planner

Looking Glass



Anomaly Detection

Application Monitor

PROTOCOL POOL ▶ PROCESSING ▶ NETWORK INTELLIGENCE

For context...

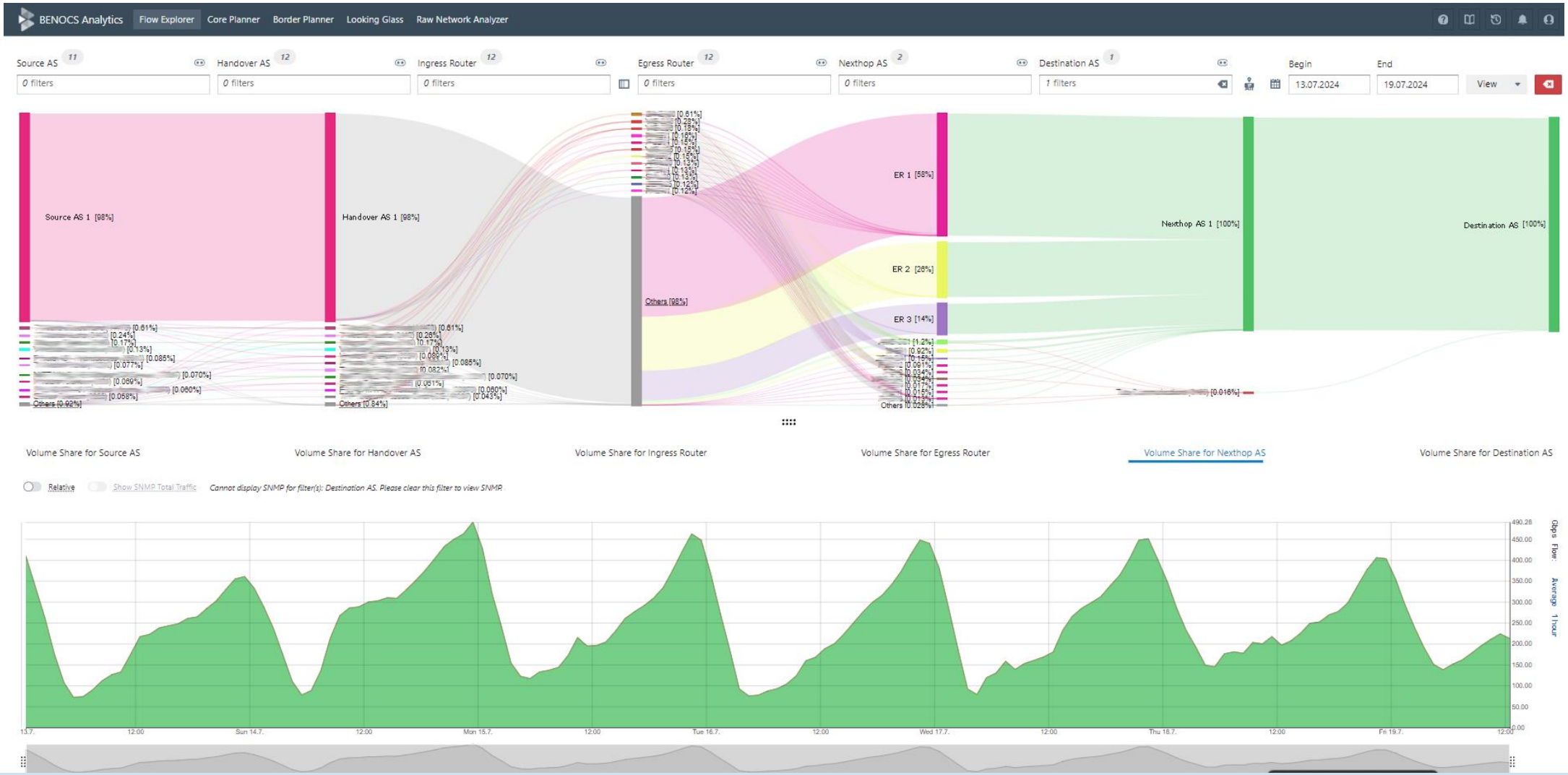
Network:
European
Incumbent

Peer:
Major
Hyperscaler

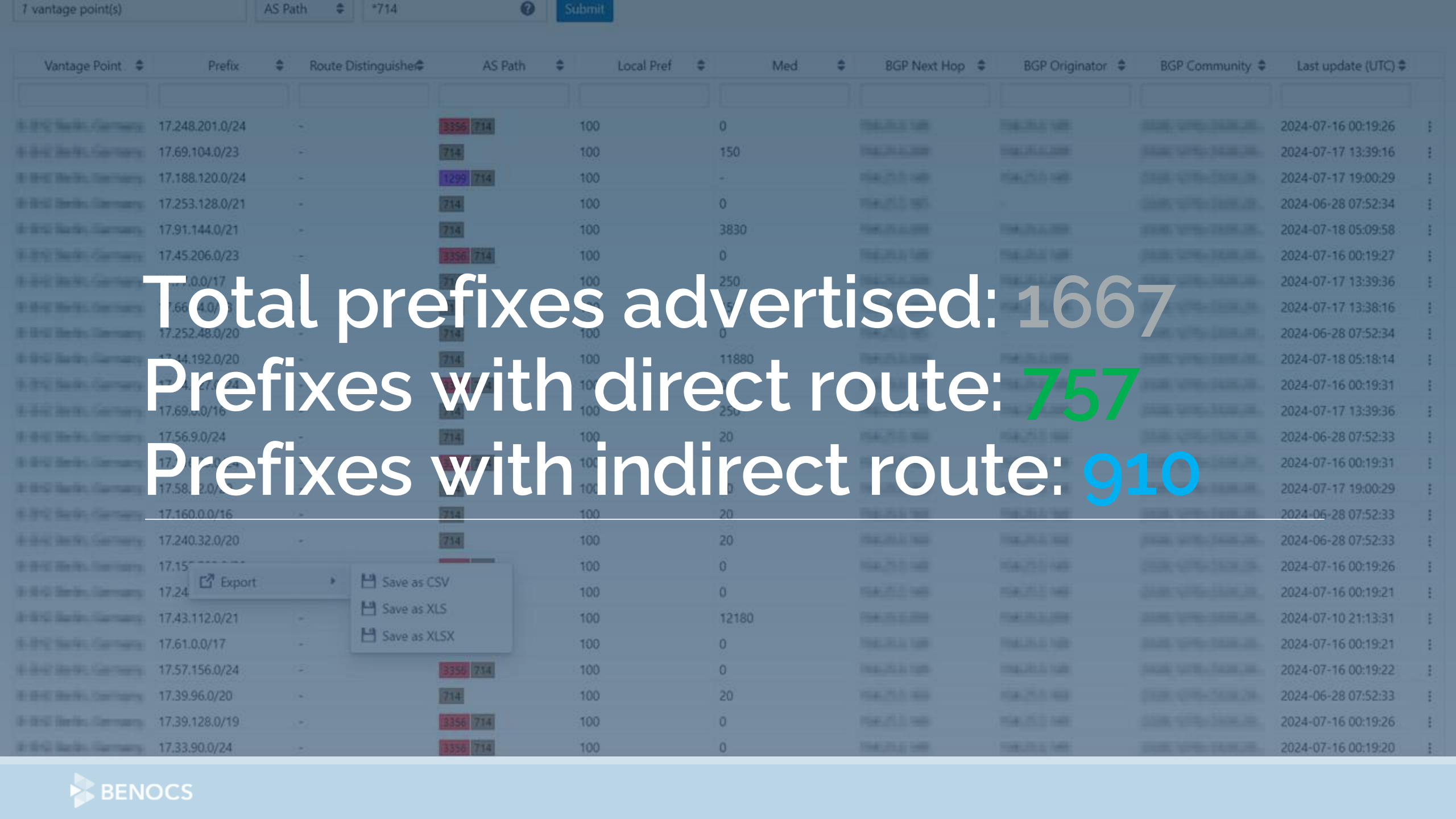
Graphs:
BENOCS
Analytics

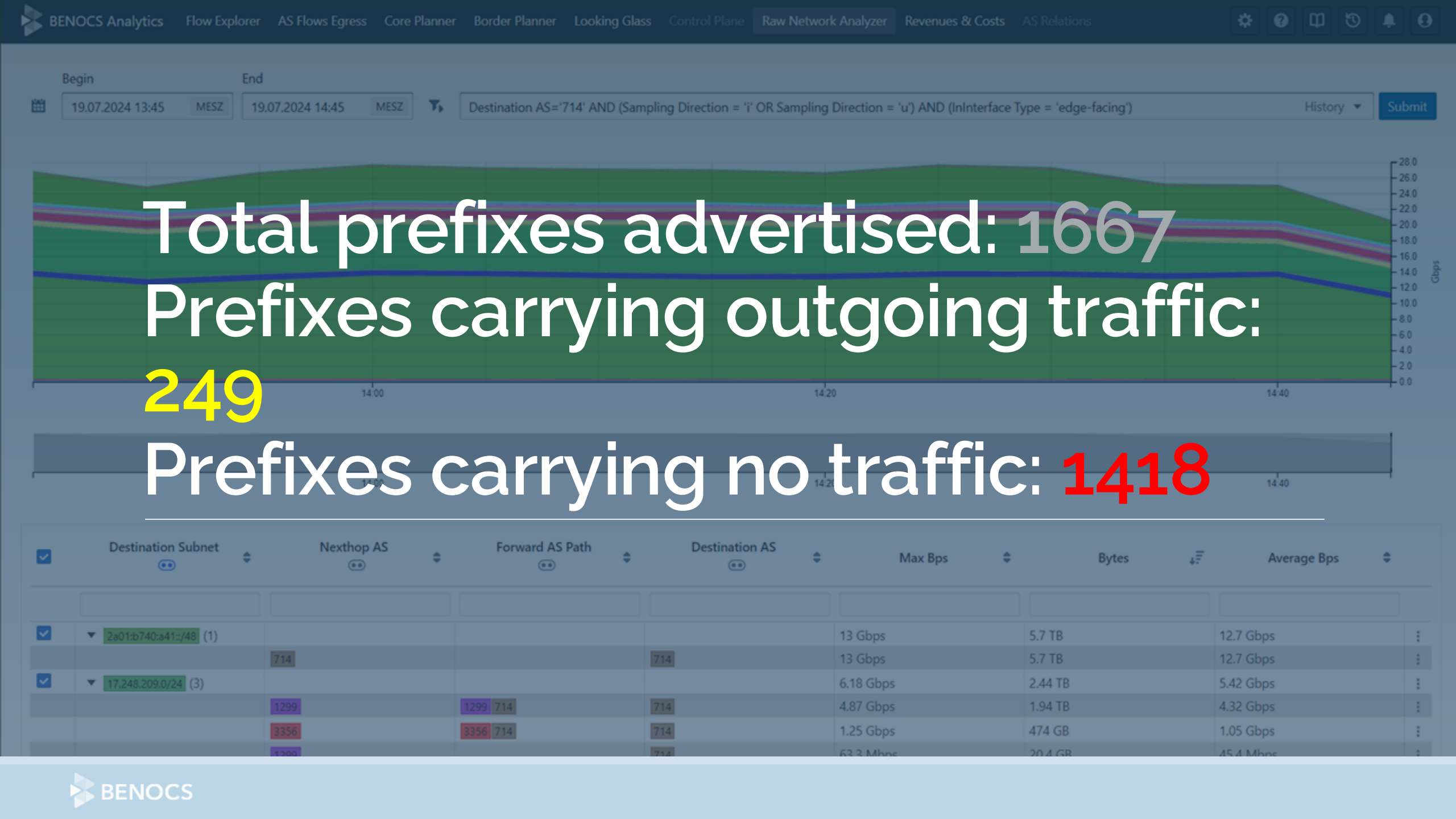
Typically, when you have a direct interconnect with a peer in multiple locations...

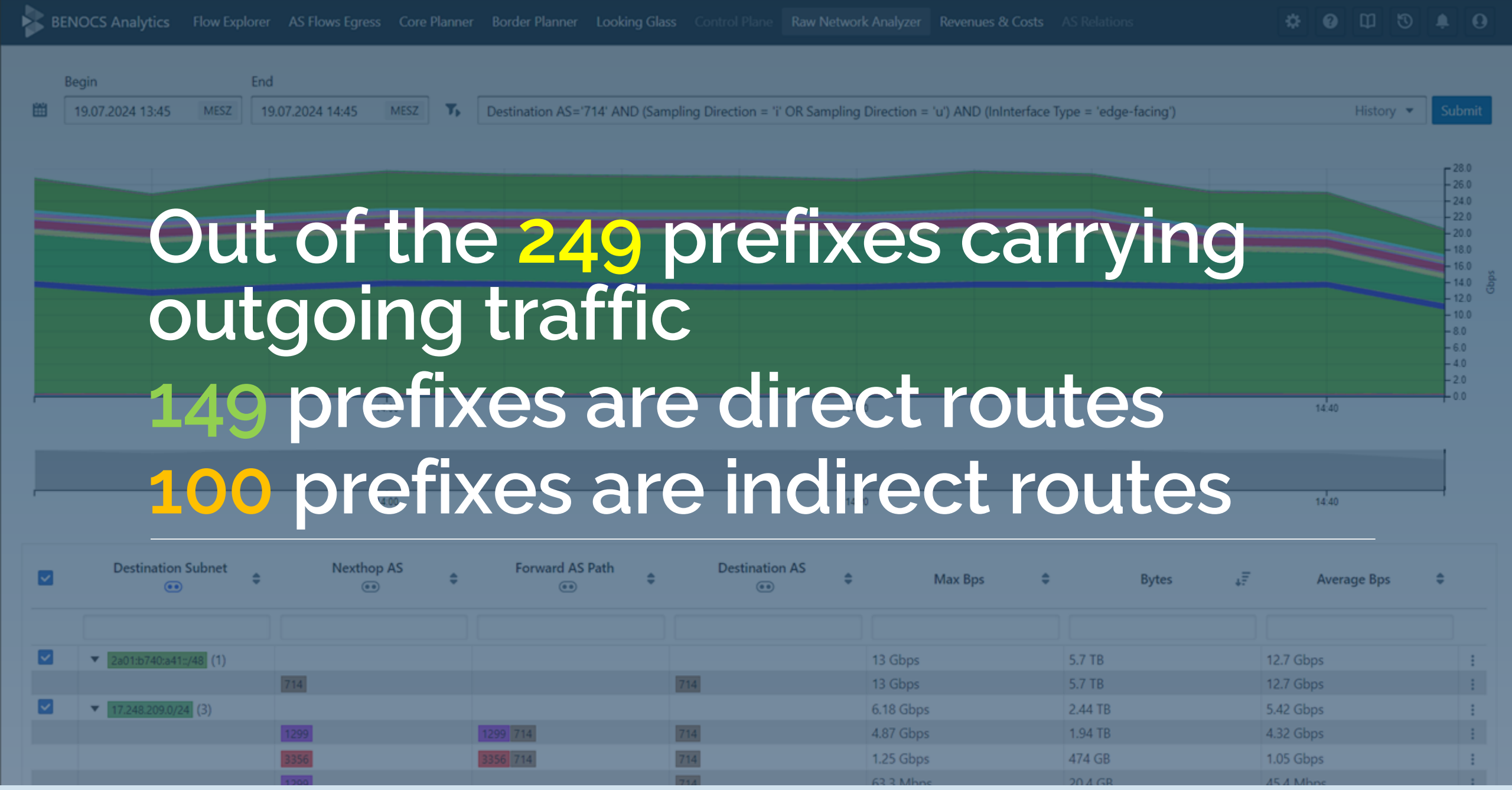
…all traffic should exit via direct route.



But with this hyperscaler…


Total prefixes advertised: 1667
Prefixes with direct route: 757
Prefixes with indirect route: 910


BENOCS Analytics
Flow Explorer
AS Flows Egress
Core Planner
Border Planner
Looking Glass
Control Plane
Raw Network Analyzer
Revenues & Costs
AS Relations
Begin
19.07.2024 13:45 MESZ
End
19.07.2024 14:45 MESZ
Destination AS='714' AND (Sampling Direction = 'i' OR Sampling Direction = 'u') AND (InInterface Type = 'edge-facing')
History
Submit
Total prefixes advertised: 1667
Prefixes carrying outgoing traffic: 249
Prefixes carrying no traffic: 1418
Destination Subnet
Nexthop AS
Forward AS Path
Destination AS
Max Bps
Bytes
Average Bps
2a01:b740:a41::/48 (1)
13 Gbps
5.7 TB
12.7 Gbps
714
13 Gbps
5.7 TB
12.7 Gbps
17.248.209.0/24 (3)
6.18 Gbps
2.44 TB
5.42 Gbps
1299
1299 714
4.87 Gbps
1.94 TB
4.32 Gbps
3356
3356 714
1.25 Gbps
474 GB
1.05 Gbps
BENOCS


BENOCS Analytics
Flow Explorer
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Core Planner
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Looking Glass
Control Plane
Raw Network Analyzer
Revenues & Costs
AS Relations
Begin
End
19.07.2024 13:45 MESZ
19.07.2024 14:45 MESZ
Destination AS='714' AND (Sampling Direction = 'i' OR Sampling Direction = 'u') AND (InInterface Type = 'edge-facing')
History
Submit
Out of the 249 prefixes carrying outgoing traffic
149 prefixes are direct routes
100 prefixes are indirect routes
Destination Subnet
Nexthop AS
Forward AS Path
Destination AS
Max Bps
Bytes
Average Bps
2a01:b740:a41::/48 (1)
13 Gbps
5.7 TB
12.7 Gbps
714
714
13 Gbps
5.7 TB
12.7 Gbps
17.248.209.0/24 (3)
6.18 Gbps
2.44 TB
5.42 Gbps
1299
1299 714
714
4.87 Gbps
1.94 TB
4.32 Gbps
3356
3356 714
714
1.25 Gbps
474 GB
1.05 Gbps

207 out of 249 prefixes have only outgoing traffic and no incoming traffic

	Traffic in (Mbps)	Traffic out (Mbps)	No of Prefixes
Direct in/indirect out	26,098 (99.9%)	5,232.2 (22.3%)	36 (14.5%)
Only direct out	0.0 (0%)	13,202.5 (56.3%)	149 (59.8%)
Only indirect out	0.0 (0%)	5,012.8 (21.4%)	58 (23.3%)
Transit in/asymmetrical transit out	14.8 (0.1%)	3.9 (0%)	5 (2%)
Transit in/transit out	6.5 (0%)	4.8 (0%)	1 (0.4%)
Total	**26,120 (100%)**	**23,456 (100%)**	**249 (100%)**

Adding location to the context

90% of the no incoming/only outgoing traffic is terminating in a different continent (US)

Our recommendation

- For US-terminating traffic (90% of outgoing traffic), consider establishing a PNI in the US and manage BGP configuration (cold-potato routing).
- For direct-in/indirect-out traffic, ensure symmetrical routes by reaching out to the BGP engineers of the Hyperscaler for potential corrections.

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Thank you!

Questions?